

PACIFIC PULP *and* PAPER INDUSTRY

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NOVEMBER, 1928

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VANCOUVER, WASHINGTON

The Columbia River Paper Mills represent integrated wood-using industries, including in their operations a sawmill, pulp mill, and paper mill. Construction work shown at the left, now largely completed, will house the Union Bag & Paper Power Corporation's bag factory.

THE *Leahy*

No-Blind Vibrating Chip Screen



No Better Screen Made for the Separation of Chips

A sharp, quick return differential vibration is transmitted to the entire surface of the screen cloth, by an 8-tooth, tool steel, heat treated cam revolving 200 R.P.M. in a bath of oil.

The chips feeding on to the Vibrating Screen are naturally stratified according to their sizes, and the finer ones are screened freely without hinderance by the oversize chips.

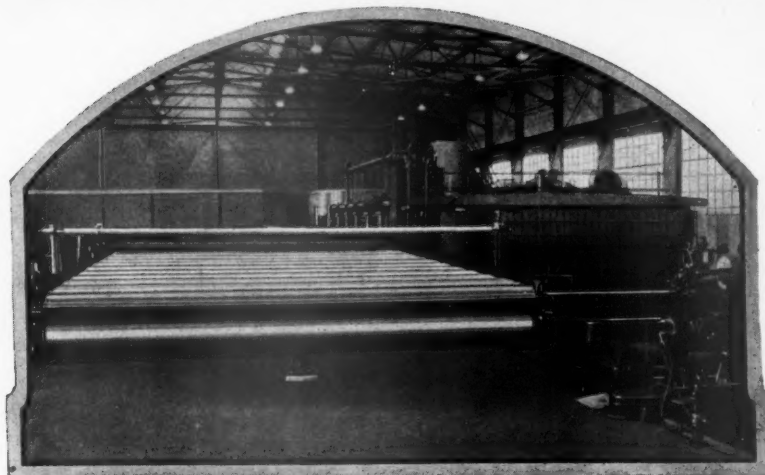
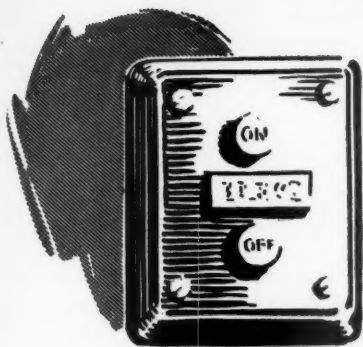
The screen cloth surface snaps back into position at the end of each vibrator stroke, clearing the meshes 1,600 times per minute, hence the screen is truly **non-binding**.

The vibrator is very rugged; it is entirely enclosed and self-oiling; it is operated through direct motor drive, and requires only $\frac{1}{2}$ H.P. for its operation.

*For Complete Information on the Leahy
Screen or on Your Conveying Problems, write*

WEBSTER-BRINKLEY COMPANY
SEATTLE, WASHINGTON

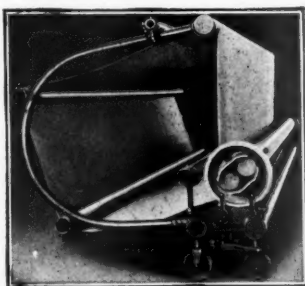
Manufacturers and Engineers of Conveying, Screening, Elevating and Transmission Machinery



Just press the Button

THE Removable Fourdrinier has so reduced the operations necessary in making wire changes that you can hardly believe it. You press a button and the entire Fourdrinier part rolls out by power as a unit. It is so simple that you marvel at it. With the Fourdrinier out of the way, the task of installing the wire becomes an easy one. Nothing to remove, to lift, to carry, to align up. Just drape the wire with the convenient means at the disposal of Removable users—roll the Fourdrinier back into place—and you're ready to go!

Once you see the Removable method, you will adopt it. Many mills have had it installed on old machines, much to their satisfaction—and new machines invariably demand it.



The Beloit patented wire carriage makes the transferring of the wire to Fourdrinier a simple and quick operation. Wire is draped into position on carriage and used as a "spare," always ready for action.

The BELOIT way is the
MODERN way

BELOIT IRON WORKS, BELOIT, WIS., U. S. A.

The BELOIT



When writing to BELOIT IRON WORKS please mention PACIFIC PULP & PAPER INDUSTRY

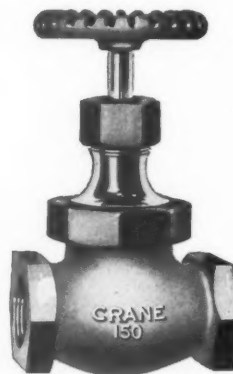
150 Pounds
Pressure

CRANE VALVES

2500 Pounds
Pressure

Wedge Gate Valve No. 465.
Crane makes gate valves of
every type.

Oil Separator 03. Crane
separators keep steam
dry and clean.



Brass Globe Valve No. 7.
A many-purpose valve.



Three Valve Lifting Trap.
Prevents waste of steam
and water.

Multiplying paper mill output by seventeen

In a span of forty-eight years, the paper industry has multiplied its output by seventeen. Faced with a phenomenally increasing demand, it has penetrated to virgin forests, worked out new processes, pioneered in a hundred departments to speed up production. It is significant of the sound efficiency of the industry that this greater production has been attained with an increase of less than one tenth in the number of plants—in other words through larger mills and modern power development. Pioneering in its field, as the paper indus-

try has in its own, Crane Co. has made a distinct and far reaching contribution to the development, control, and utilization of power. It has developed valves and fittings to withstand highest pressures and superheat, studied the needs of industry and designed piping materials to meet them, devised steam specialties and other equipment to cut costs.

Now, as it served the infant industry in 1880, Crane Co. is in a position to supply the giant paper industry with piping materials for every need.

CRANE

Address all inquiries to Crane Co., Chicago

GENERAL OFFICES: CRANE BUILDING, 836 S. MICHIGAN AVENUE, CHICAGO

Branches and Sales Offices in One Hundred and Sixty-six Cities

National Exhibit Rooms: Chicago, New York, Atlantic City, San Francisco, and Montreal

Works: Chicago, Bridgeport, Birmingham, Chattanooga, Trenton, Montreal, and St. John, Quebec; Ipswich, England

CRANE EXPORT CORPORATION: NEW YORK, SAN FRANCISCO, MEXICO CITY, HAVANA

CRANE LIMITED: CRANE BUILDING, 1170 BEAVER HALL SQUARE, MONTREAL

CRANE-BENNETT, LTD., LONDON

CRANE: PARIS, BRUSSELS

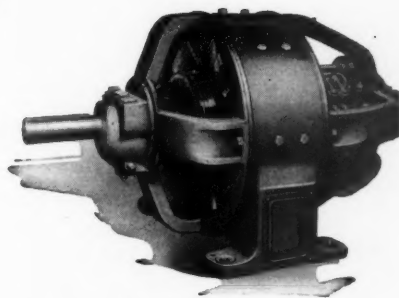
When writing to CRANE CO. please mention PACIFIC PULP & PAPER INDUSTRY

These are the motors for super-calender drive

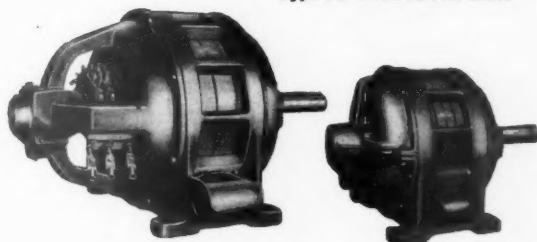
Close speed adjustment over a wide range is the primary requisite in super-calender drive. Where direct current is available, the Type CD motor completely fulfills the exacting requirements; for alternating current, two motors of the required size, Types MT and KT, meet every demand.

Extreme simplicity, superior insulation, push-button control, and, above all, ideal operating characteristics make these motors the most satisfactory drive you can have. Design and construction based on years of experience are your assurance of reliable, economical service.

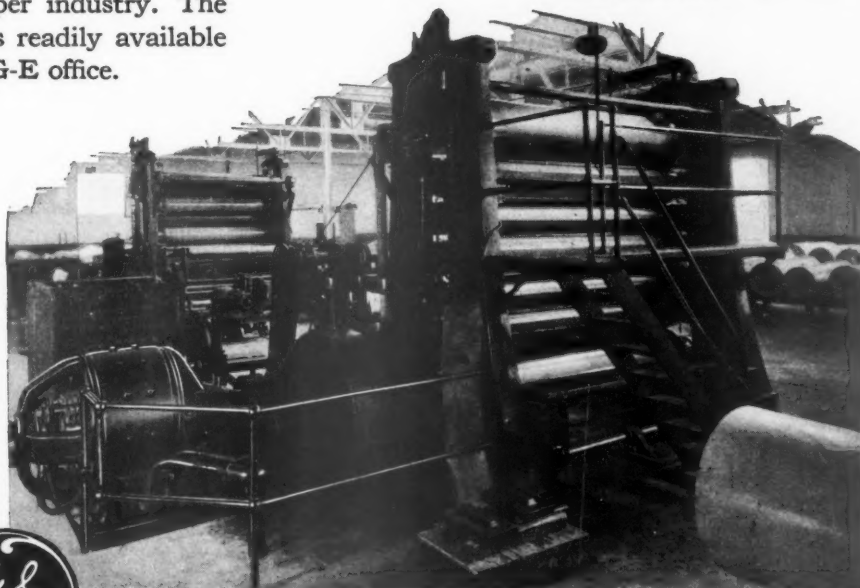
General Electric supplies complete electric equipment for the paper industry. The advice of specialists is readily available through your nearest G-E office.



Type CD direct-current motor



Type MT and Type KT induction motors for two-motor alternating-current drive



This Type CD motor is giving excellent service at the Mead Pulp and Paper Co., Chillicothe, Ohio

Apply the proper G-E motor and the correct G-E controller to a specific task, following the recommendations of G-E specialists in electric drive, and you have G-E Motorized Power. Built in or otherwise connected to all types of industrial machines, G-E Motorized Power provides lasting assurance that you have purchased the best.



Motorized Power
-fitted to every need

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, SCHENECTADY, N. Y., SALES OFFICES IN PRINCIPAL CITIES

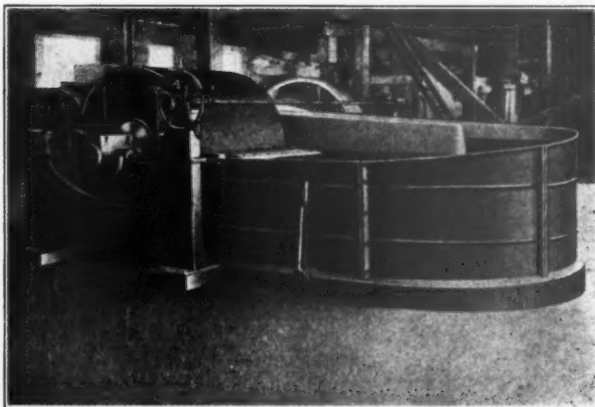
When writing to GENERAL ELECTRIC Co. please mention PACIFIC PULP AND PAPER INDUSTRY

"Your Paper is made in your Beaters"

NEW TYPE

HIGH DENSITY

BETTER CIRCULATING



THE PROBLEM is "how to beat *more* stock into *better* quality with *less* cost for labor and power."

THE ANSWER is "the Dilts New Type, High Density, Better Circulating Beater, built with high tub and with the roll located toward the rear end."

We could re-
build your
Beaters to
our NEW
TYPE de-
sign —

Dilts
MACHINE WORKS, Inc. FULTON, N. Y.
EXPORT OFFICE - 15 PARK ROW - NEW YORK CITY

SOME 1928 ORDERS

Ohio Box Board Co.	8
International Paper Co.	12
Gulf States Paper Corp.	6
Oswego Falls Corp.	4
St. Regis Paper Co.	8
Mobile Paper Mills	2
Consolidated Paper Co.	6
And Many Others	

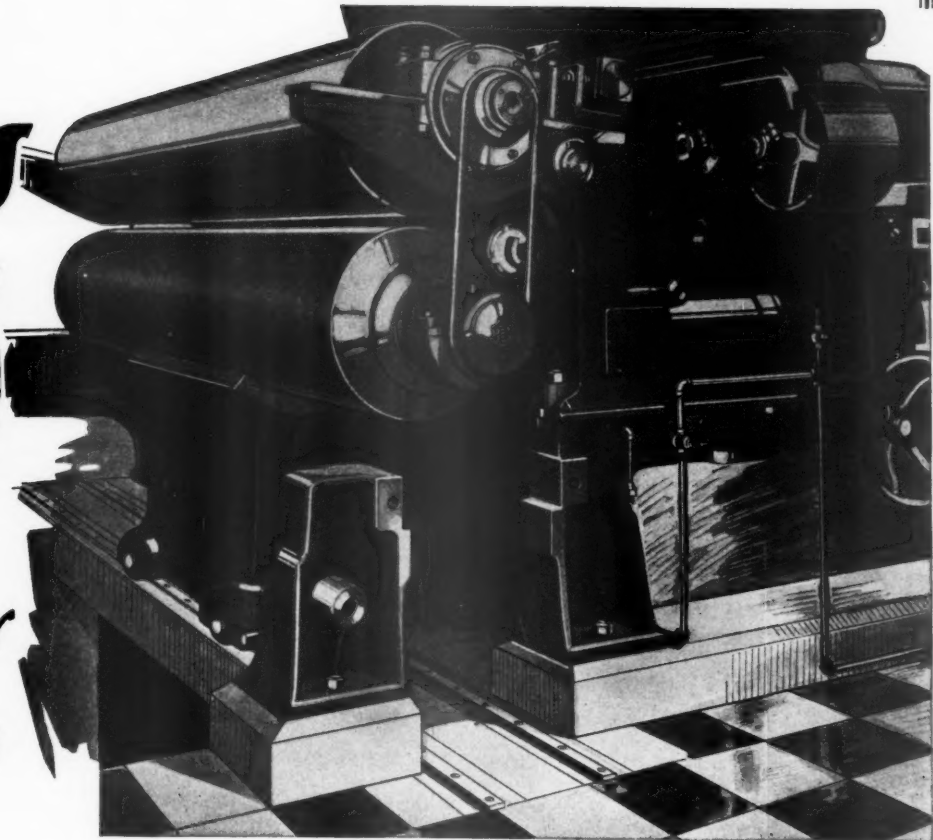
"Your Paper is made in your Beaters"

When writing to DILTS MACHINE CO. please mention PACIFIC PULP & PAPER INDUSTRY

Important IMPROVEMENTS

**ON
PRESS
ROLL
SECTION**

*Get the
October
Messenger
for
Details*



For Fourdrinier and Cylinder Machines

LEARN about the new Black-Clawson Hydraulic Lift and how one man can now easily and quickly raise top rolls, or take out bottom rolls.

Learn the advantages of the new Black-Clawson Oscillating Patented Doctor.

Read about the new wet broke Conveyor.

Find out how we have improved the Save-all so it won't interfere with the changing of felts.

THESE MANY PRESS PART IMPROVEMENTS APPLY TO FOURDRINIER AND CYLINDER MACHINES ALIKE AND SHOULD BE OF INTEREST TO EVERY MILL MAN IN THIS COUNTRY AND ABROAD.

Send for the Messenger—October Number

BLACK-CLAWSON



Built with Machine-Tool Accuracy



When writing to BLACK-CLAWSON Co. please mention PACIFIC PULP & PAPER INDUSTRY

Carthage Chip Crushers

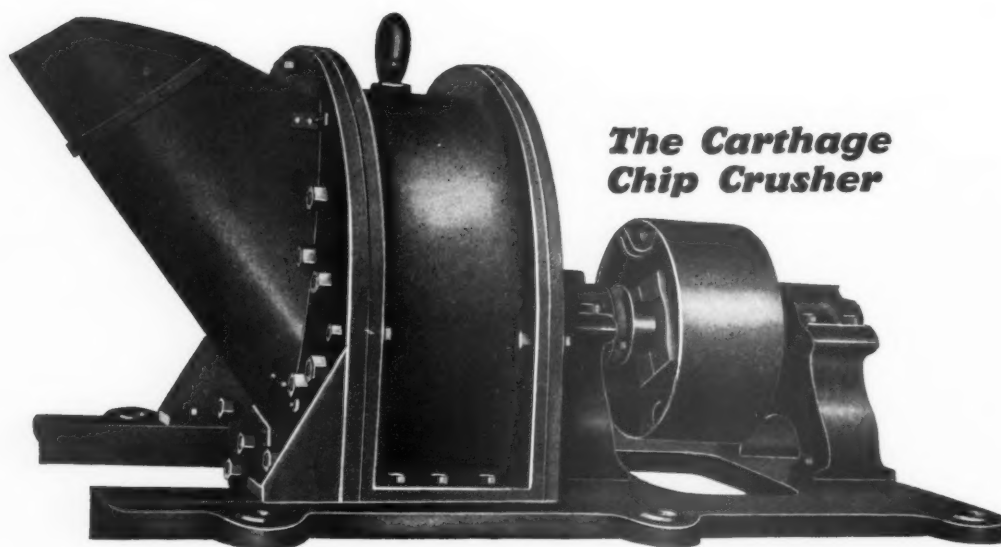
Eliminate Sawdust and Needles

Pass your chip screen rejections through a Carthage Chip Crusher.

The Carthage Chip Crusher produces clean chips—which can be directly added to the screened chip pile.

The pins are so spaced that sawdust and needles are eliminated. Simplicity of construction and easy accessibility make Carthage Crushers inexpensive as regards operation or maintenance.

Ask for Bulletin and list of Pacific Coast installations.



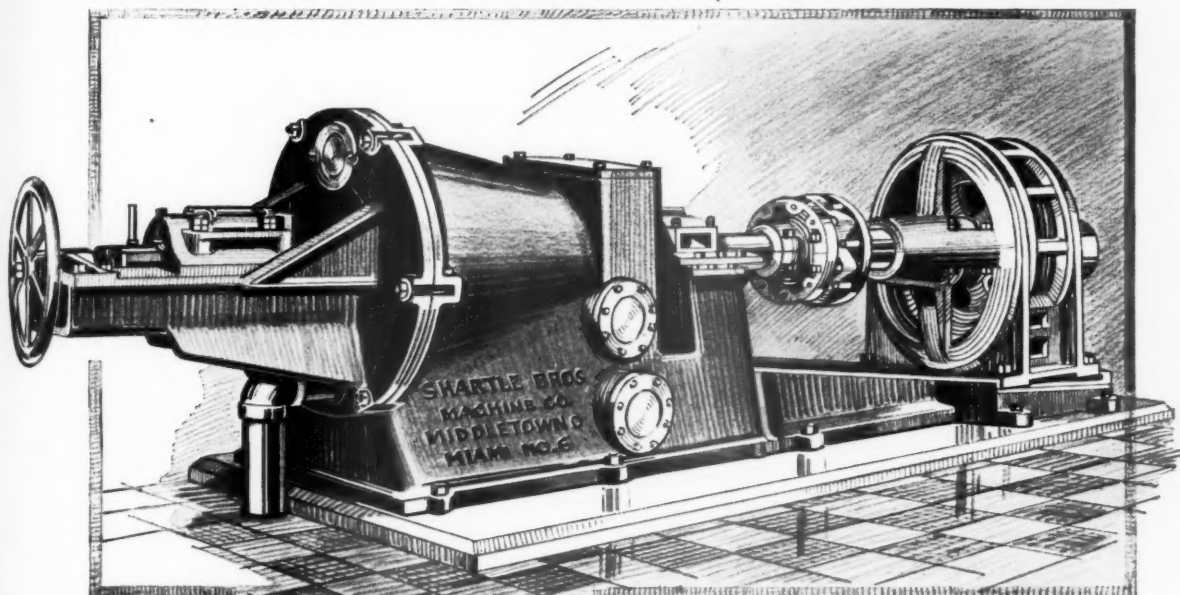
Carthage Machine Company

Carthage, N. Y., U. S. A.

Belleville, Ont., Canada

Founded 1894

Miami



A FAR BETTER JORDAN AND SEVERAL REASONS WHY

ON the No. 6 Miami Jordan we have increased the shaft diameter 28% AND AT THE SAME TIME DECREASED THE BEARING CENTER 38%. Read that again. **THINK** what that means—Bigger Shaft and shorter bearing centers.

The answer, of course, is **RIGIDITY**, and if there is one thing you **MUST HAVE** in a Jordan it is **RIGIDITY**. It is the difference between success and failure. It is **ONE** outstanding reason why No. 6 Jordans are doing better work cheaper. The No. 6 is unquestionably the best Jordan we have ever built.

The adoption of Timken Tapered Roller Bearings represents another high point of No. 6 construction—helps maintain perfect alignment of shaft and shell—makes the unit run far easier and smoother—adds extra years of service to the job.

Other features that help to make the No. 6 a better Jordan? Glad to go over them with you.

SHARTLE BROTHERS

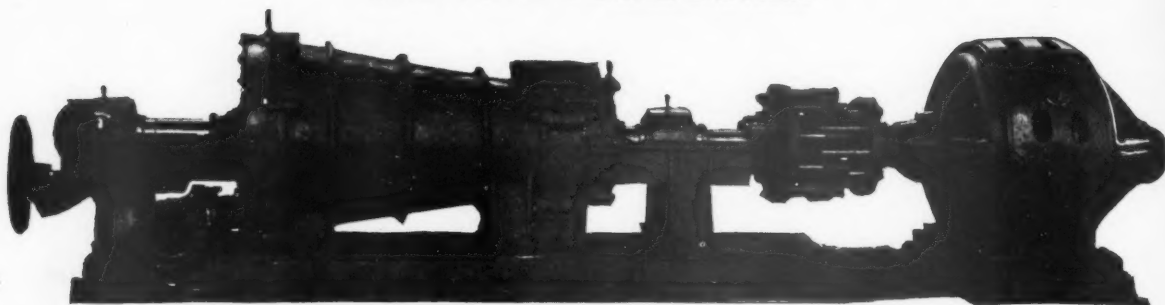
DIVISION OF THE BLACK-CLAWSON COMPANY

Middletown,



Ohio

When writing to SHARTLE BROS. MACHINE CO. please mention PACIFIC PULP AND PAPER INDUSTRY



The No. 2 EMERSON JORDAN

is equipped with

TIMKEN ROLLER BEARINGS



*A New Epoch in the
paper making industry*

The No. 2 Emerson Jordan, shown above, is a masterpiece of refining equipment, having Timken Roller Bearings and Bandless Plug. This sturdy, well constructed bearing application is just another characteristic of Emerson Quality and progressive engineering.

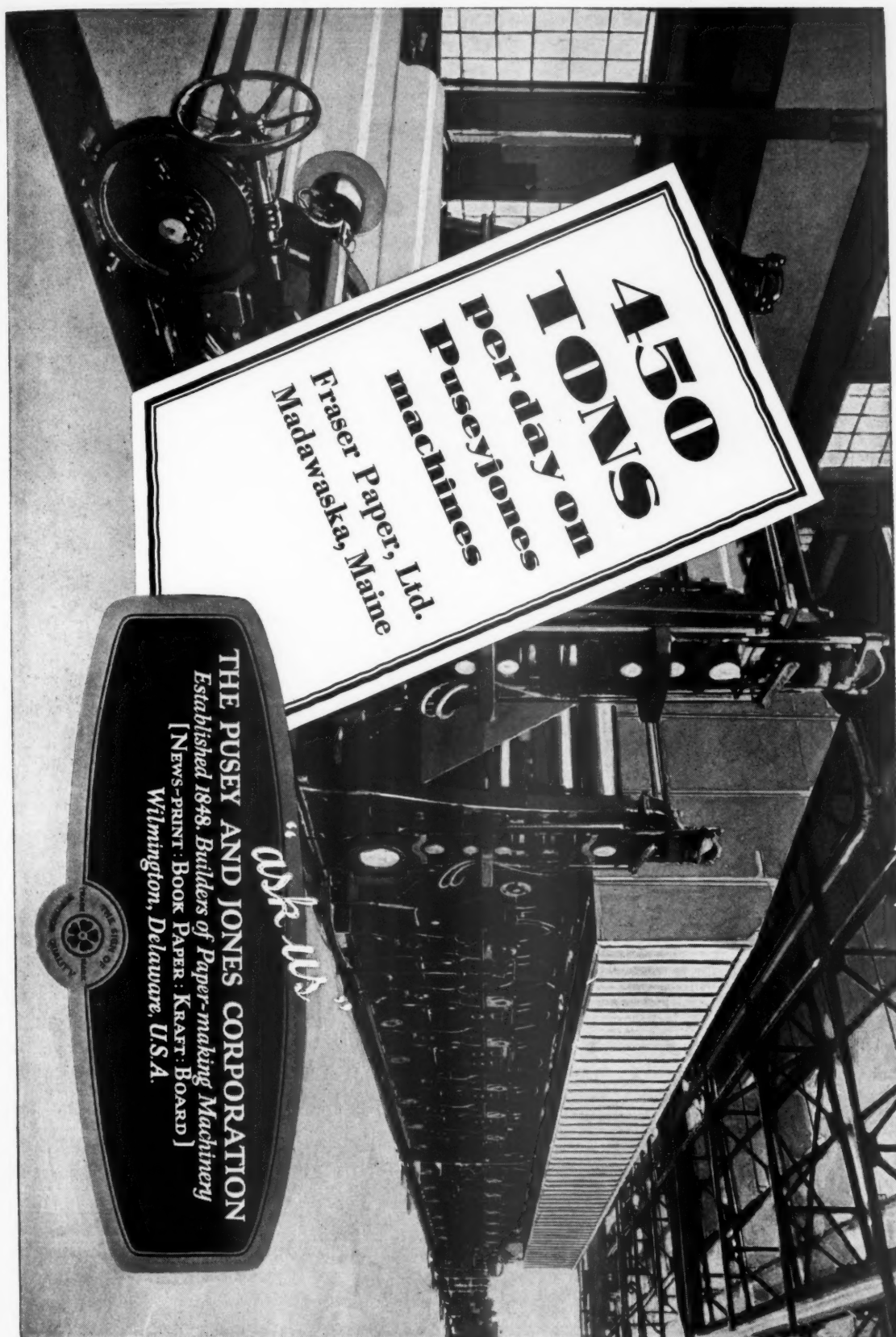
Features to Consider:

- (1) Timken Roller Bearings, both radial and thrust, are mounted on taper-bored sleeves
- (2) Bearings are enclosed in sealed housings that prevent the bearing troubles generally experienced when bearings are mounted directly on the shaft.
- (3) Bearings are NOT mounted directly on the shaft.



THE EMERSON MANUFACTURING CO., Lawrence, Mass.

When writing to EMERSON MFG. CO. please mention PACIFIC PULP AND PAPER INDUSTRY




**450
TONS
per day on
Pusey Jones
machines**

Fraser Paper, Ltd.
Madawaska, Maine

"ask us"

THE PUSEY AND JONES CORPORATION
Established 1848. Builders of Paper-making Machinery
[NEWS-PRINT: BOOK PAPER: KRAFT: BOARD]
Wilmington, Delaware, U.S.A.



When writing to PUSEY & JONES CORPORATION please mention PACIFIC PULP AND PAPER INDUSTRY

W. G. E. SMITH, PRESIDENT & TREAS.
S. C. E. SMITH, VICE-PRESIDENT



E. A. PETERSON, VICE-PRESIDENT.
H. W. BATES, SECRETARY.

SMITH AND VALLEY IRON WORKS CO.

Builders of

VALLEY IRON WORKS
PULP AND PAPER MILL MACHINERY

SMITH & WATSON
LOGGING MACHINERY

400 FRONT STREET
PORTLAND, OREGON

ANNOUNCE

Their appointment as Exclusive Representatives for the
entire Pacific Coast to build and sell
the complete line of

Emerson Jordans

in all sizes
— Five to Fifty Tons Capacity —
and the

Bolton Bandless Plugs and Fillers

Information regarding this remarkable improvement in
Jordan Plug construction may be had by addressing
Smith & Valley Iron Works Co., Portland, Oregon

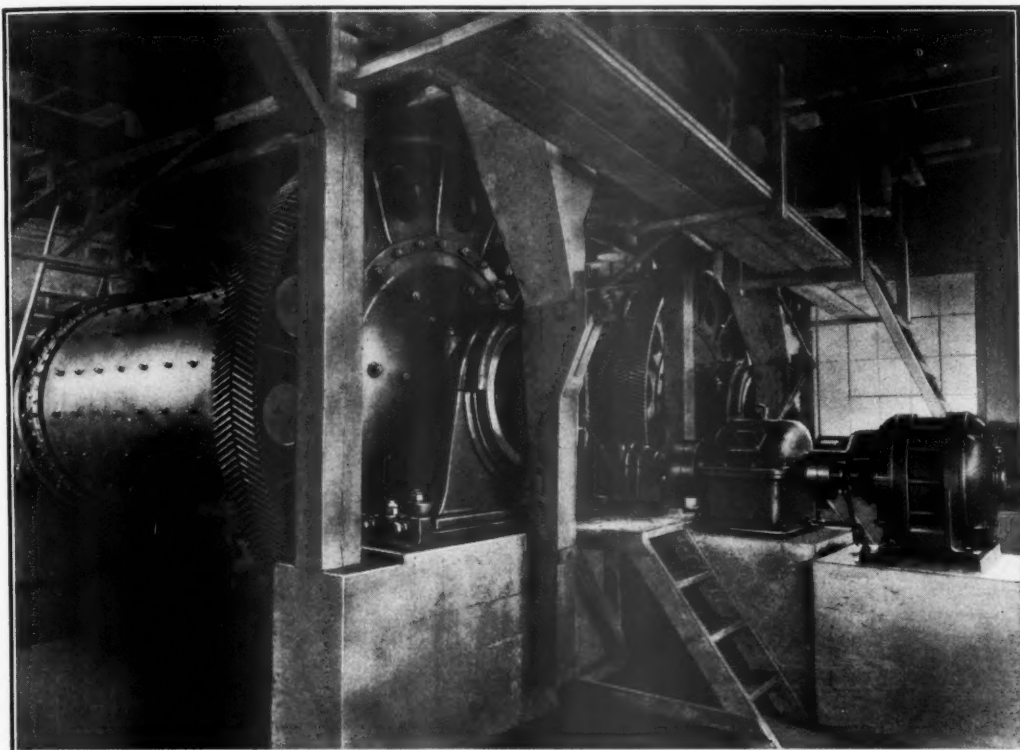
Pacific Coast Supply Company

Exclusive Sales Agents

San Francisco—712 Welch Bldg.

Portland—909 Lewis Bldg.

Seattle—2305 L. C. Smith Bldg.



ALLIS-CHALMERS ROD-MILLS OPERATING ON COOKED
CHIPS IN THE MANUFACTURE OF WRAPPING PAPER

Lower Operating Costs

and an

Improved

Quality of Paper

Are the results obtained with Allis-Chalmers Rod Mills used in the capacity of beaters or refiners on wood pulp and screenings.

Numerous commercial installations have fully demonstrated these facts to be worth while investigating.

*Let Us Tell You About the Rod Mill and
Its Application in the Paper Industry.*

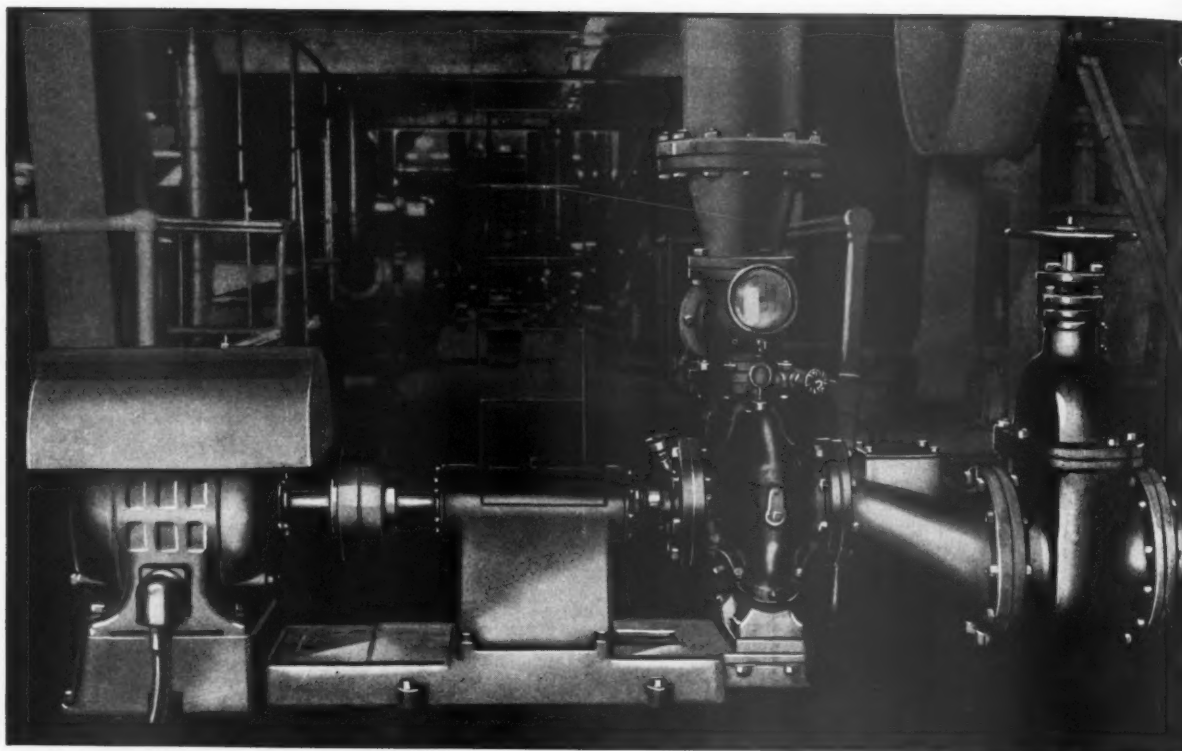
ALLIS-CHALMERS

MILWAUKEE, WIS. U. S. A.

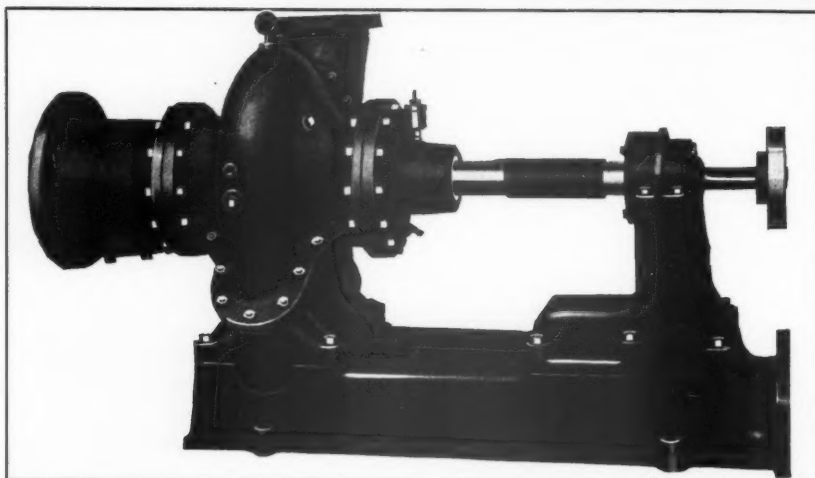
PACIFIC COAST OFFICES: Rialto Building, San Francisco, Calif.; Rowan Building, Los Angeles, Calif.;
115 Jackson Street, Seattle, Wash.; 505 Lumbermen's Building, Portland, Ore.; 525 Symes Building, Denver,
Colo.; 915 Kearns Building, Salt Lake City, Utah; 308 Heard Building, Phoenix, Ariz.;
619 Frost National Bank Building, San Antonio, Texas.

When writing to ALLIS-CHALMERS MFG. CO. please mention PACIFIC PULP & PAPER INDUSTRY

The F-M Paper



The above installation is a 5 inch F-M Stock Pump at the East Millinocket Plant of the Great Northern Paper Co. It is directly connected to a 25 hp. motor. Subsequently, four of these pumps were installed because of the performance of the first one.



FAIRBANKS- DIESEL ENGINES . . .

When writing to FAIRBANKS-MORSE please mention PACIFIC PULP AND PAPER INDUSTRY

Stock Pump

can solve your stock pumping problem

Better equipment leads to better methods

The superintendent knows:

that fast handling of stock solutions without separation of solids from liquids is a most important phase of the continuous, uninterrupted production necessary for efficient paper mill operation.

This Fairbanks - Morse Paper Stock Pump with its Patented Impeller gives continuous flow at a uniform pressure. Smooth passages without sharp edges pass stringy solids in solution without clogging or separation.

The F-M Paper Stock Pump has a high efficiency — high shut-off pressure and does not require frequent cleaning. A 45° split casing makes inspection a simple matter.

Fairbanks-Morse engineers can quickly show you how easily your stock pumping problem can be handled.

FAIRBANKS, MORSE & CO., Chicago

Pacific Coast Service

Los Angeles, Calif., 423 East Third St.	Seattle, Wash., 550 First Ave., S.
San Francisco, Calif., Spear and Harrison Sts.	Spokane, Wash., 518 East First Ave.
Portland, Ore., East First and Taylor Sts.	Salt Lake City, Utah, 14 S. West Temple
Tacoma, Wash., 432 Perkins Bldg.	

MORSE PUMPS

MOTORS . . . SCALES

When writing to FAIRBANKS-MORSE please mention PACIFIC PULP AND PAPER INDUSTRY

PA 18.18

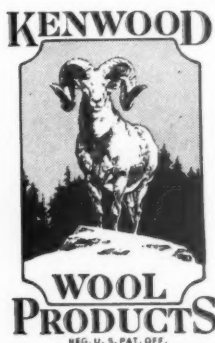
KENWOOD TANNED FOR FOURDRINIER MACHINES FELTS

To the scientific selection of Wool and the improvement of Design have been added the Kenwood Tanning Processes which hold the initial characteristics of SOFTNESS, OPENNESS and NAP and afford greater resistance to the deteriorating effects of water, alkali and acids.

The result is greater water removal ability, smoother and more uniform running, better finish and higher production throughout a longer life.

F. C. HUYCK & SONS

KENWOOD MILLS, ALBANY, NEW YORK
KENWOOD MILLS LTD., ARNPRIOR, ONTARIO



When writing to F. C. HUYCK & SONS please mention PACIFIC PULP AND PAPER INDUSTRY

Nothing is
apt to cost
so much as
a bearing
that cost
so little

You men who plan, build, use or pay for machines of any kind, remember this: It costs more to replace a poor bearing than to buy the best one that SKF ever produced. AND SKF ANTI-FRICTION BEARINGS ARE THE HIGHEST PRICED IN THE WORLD.



ANOTHER ONE OF THE 47 PAPER MACHINERY
MANUFACTURERS THAT USES **SKF** BEARINGS
PUSEY & JONES CORP.



*Largest Kraft Paper Machine in the World
Runs on **SKF** Bearings*

THE largest kraft paper machine in the world is equipped with SKF Ball Bearings throughout with the exception of the main presses and dryer cylinders. Where performance writes the specifications, SKF are sure to be chosen. That is why they were put on this 246" machine built by the Pusey & Jones Corporation for the new mill of the Southern Advance Bag and Paper Co., Inc., at Hodge, La.

When the machine was put into service it ran without a break for 18 hours. Not only is continuous production assured but marked operating economies are also secured with SKF Bearings. In one mill a Certified Survey has shown that SKF Bearings saved \$9,978.04 a year. A request for the complete report obligates you in no way. Just ask for Certified Survey No. 2147.

SKF Industries of California, Inc.

115 New Montgomery St.
San Francisco

480 Burnside St.
Portland, Oregon

1114 South Hope St.
Los Angeles

2147

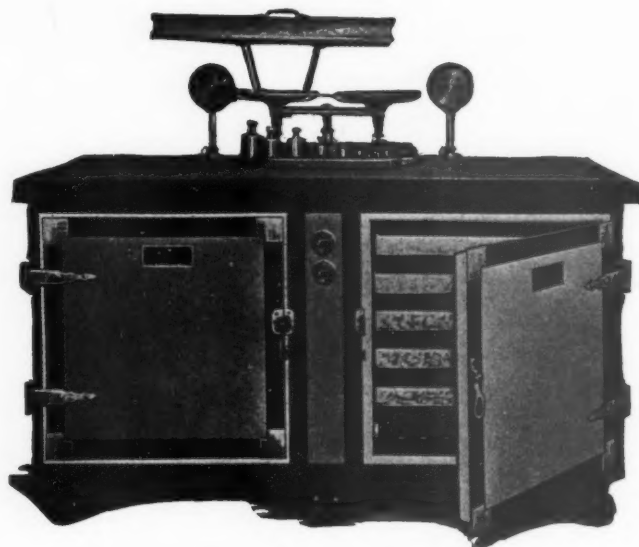
SKF

The Highest Priced Bearings in the World

Accurate Equipment for Testing the Moisture of Your Pulp Will Save You Thousands of Dollars

THE WILLIAMS STANDARD PULP TESTING OUTFIT

Conforms in every detail with the Official Method for the Sampling and Testing of Pulp as approved by the Technical Association of the American Pulp and Paper Industry, the Canadian Pulp and Paper Industry, the American Woodpulp Importers Association, etc.



*New Horizontal Model
Work-Table Top, Separate Compartments, Quicker Drying*

FEATURES

OVEN—Double walled, electrically heated, with thermostat control.

SAMPLE TRAYS—Removable for weighing hot samples while covered.

THERMOMETERS—High grade six-inch dial form, one in each compartment.

SCALES—Accurate balances with brass weights, counterpoised tray holder and cover.

It will pay you to write today

THE WILLIAMS APPARATUS CO., Park Place, Watertown, N. Y.

Of Vital Importance *for* quality and quantity production



The **BIRD SCREEN**

Throughout the world the ability to produce uniformly good paper continuously at high speeds is backed up by Bird Screens. Twenty-five thousand odd tons of paper pass through Bird Screens every day.

No matter what kind or grade of paper you make, you need Bird Screens.

Ask us to prove it.

**BIRD
MACHINERY**

BIRD MACHINE COMPANY
South Walpole : : Massachusetts

ALL DOWN THE LINE

Oliver Continuous Drum Filters *and* American Continuous Disc Filters

are being used in Paper Mills for

Deckering after Screening
High Density Thickening before Bleaching
Bleach Washers

Lime Mud Washers
Brown Stock Washers
Brown Stock Re-washers

Wet Machine Moulds
Save-Alls
Combination Units

Board Forming Moulds

The Mills that have them in operation are
"Lined up for Success"

OLIVER UNITED FILTERS INC.

successor to

Oliver Continuous Filter Co., and United Filters Corporation

San Francisco
Federal Reserve Bank Bldg.,

New York
33 W. 42nd Street

Chicago
565 Washington Blvd.

Los Angeles
108 W. Sixth Street

Salt Lake City
316 Felt Bldg.

London
Paris
Johannesburg
Montreal

Melbourne
Tokyo
Halle, Germany
Honolulu

Soerabaia, Java
Manila, P. I.
Scheveningen

Factories:

Oakland, Calif.

Hazleton, Penna.

When writing to OLIVER UNITED FILTERS INC. please mention PACIFIC PULP AND PAPER INDUSTRY

Every Bearing a Timken Bearing

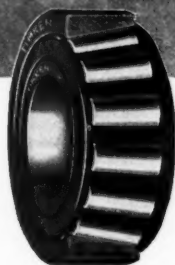
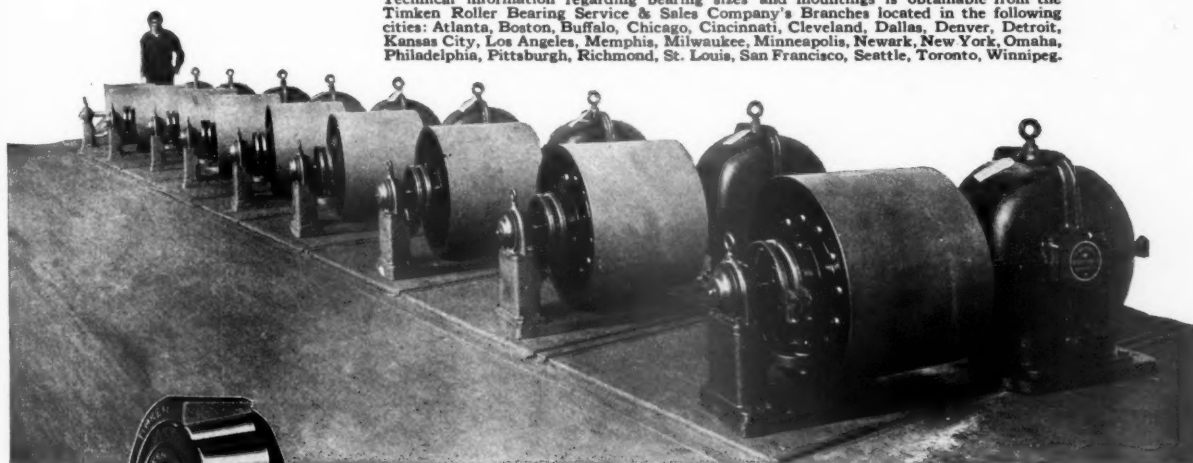
Wear prevention is the big reason for Timken Bearings in noted makes of paper mill equipment of many types. The extraordinary endurance, economy records and quiet operation of Timken Bearings in gear units make them worthy of the confidence exhibited by The Bagley & Sewall Co., Watertown, N. Y., whose latest enclosed type spiral bevel gear drives are Timken-equipped throughout.

Here Timkens are called upon to transmit the highest percentage of power, and to carry the heavy thrust, shock and radial loads always combined in heavy belt drives and in spiral bevel gear operation. It takes more than the best anti-friction properties. It demands the full thrust capacity, greater load carrying area, and extreme rigidity made possible only by Timken tapered construction, Timken *POSITIVELY ALIGNED ROLLS*, and Timken-made electric steel.

Preserving the alignment of shafts, gears and pulleys, Timken Bearings are a chief factor in maintaining continuous operation at lower cost for labor, power and lubricant.

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

Technical information regarding bearing sizes and mountings is obtainable from the Timken Roller Bearing Service & Sales Company's Branches located in the following cities: Atlanta, Boston, Buffalo, Chicago, Cincinnati, Cleveland, Dallas, Denver, Detroit, Kansas City, Los Angeles, Memphis, Milwaukee, Minneapolis, Newark, New York, Omaha, Philadelphia, Pittsburgh, Richmond, St. Louis, San Francisco, Seattle, Toronto, Winnipeg.



TIMKEN

Tapered

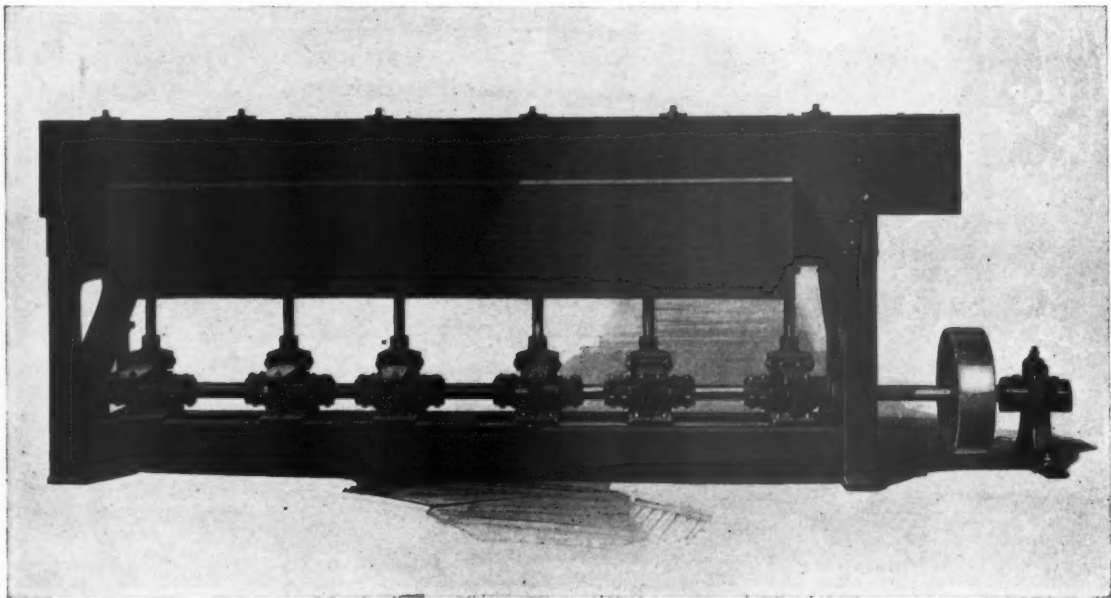
ROLLER BEARINGS

When writing to TIMKEN ROLLER BEARING CO. please mention PACIFIC PULP & PAPER INDUSTRY

The Inclined Harmon Screen is Manufactured Exclusively by the
Bagley and Sewall Company

LEVEL AND INCLINED TYPES *of* HARMON SCREENS

Maximum Capacity — Clean Stock — Less Power



View of Flat Type Screen

We are prepared to give service on orders received for these screens
and can make prompt deliveries on screens and parts.

— Bulletins on Request —

The **BAGLEY and SEWALL CO.**
WATERTOWN — NEW YORK
1823 — 1928

DU PONT *Dyestuffs*

DU PONT *Crocein Scarlet* N EXTRA

For the dipping of plain and crepe tissues and calender coloring board, we recommend du Pont Crocein Scarlet N Extra. It possesses excellent solubility; high tinctorial power; brilliancy of shade and extreme fastness to light.

With one of our branch offices strategically located on the west coast, we are able to offer you prompt delivery from warehouse stocks and technical assistance on application problems.

E. I. DU PONT DE NEMOURS & CO., Inc.

Dyestuffs Department

Wilmington, Delaware



REG. U. S. PAT. OFF.

San Francisco Branch Office:

569 Mission Street

PAPER MILL MACHINERY

JORDAN ENGINES—PUMPS—"RAINSTORM" SHOWER PIPES

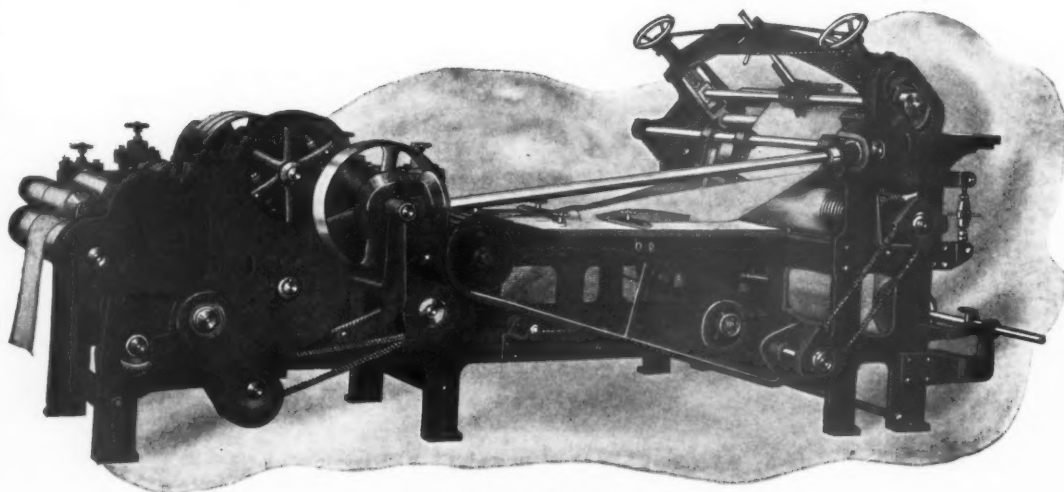
*Birdseye View
of Our
Modern Plant
Where
We Design and
Build Machinery
for the Paper
Mill*



Fourdrinier
Cylinder
Wet
Machines

The Undercut Trimmer

PAPER BAG MAKING MACHINERY



Our Heavy Duty Tuber

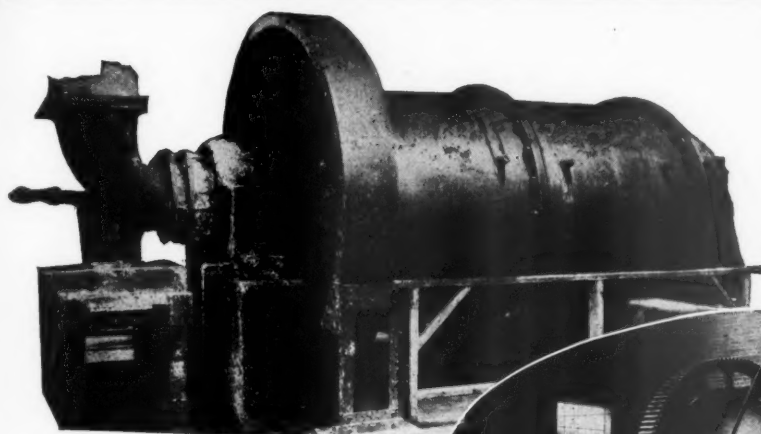
—ESTABLISHED 1828—

The Smith & Winchester Mfg. Co.

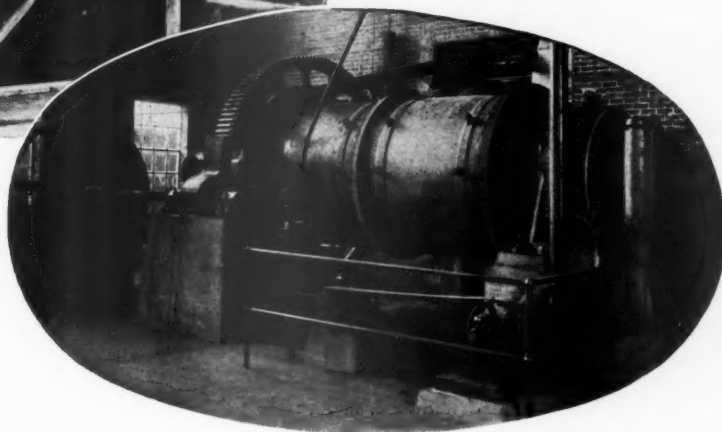
Dept. MFP.

SOUTH WINDHAM, CONN.

When writing to SMITH & WINCHESTER MFG. CO. please mention PACIFIC PULP & PAPER INDUSTRY



Two Marcy *Open End* Rod Mill units—one on wheat straw and the other on unbleached sulphite stock



The Trend is Towards Rod Mills

JUST recently a man prominent in paper manufacturing circles made the statement that "Never in recent years has there been such a step of far reaching importance as that of using rod mills for beating and refining."

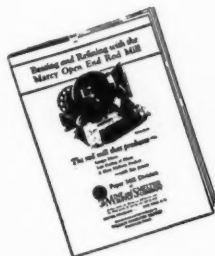
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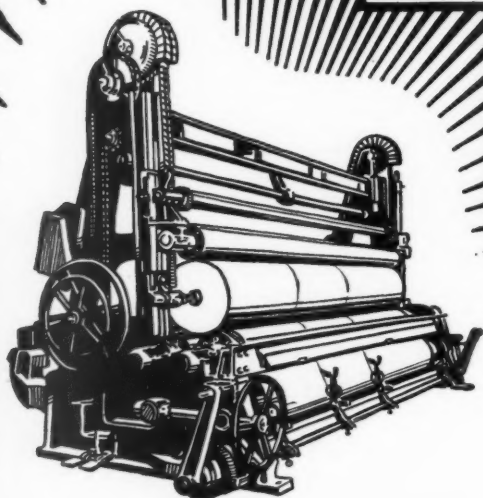
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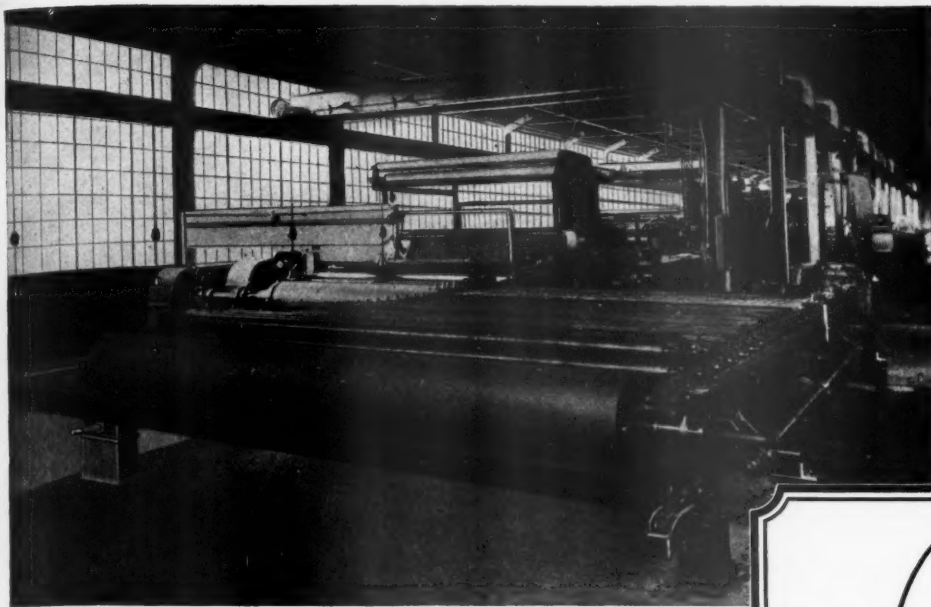
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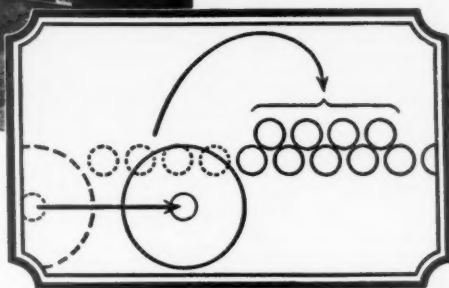


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Number 12

Waste—and Its New Definition

A MAN who has fallen in a lake may not be accused of wasting water when he wrings out his clothes. But let him spill that precious pint or two when he is in a party lost on the desert and he is virtually a criminal. The difference is one of circumstances, and upon circumstances rests the true definition of "waste."

When our fathers pushed westward from the Atlantic Coast into the wilderness their great aim was to get rid of the trees as quickly as possible so that they might get at the land. Now, but a few years later in those same states where the pioneers cut so ruthlessly, there is little left but the tales of the timber that used to be, and rotting stumps to authenticate the stories.

Oh, there was lots of timber! There'd never be a time when all these trees were gone.

Today the axes are biting into the "last frontier" of our forest lands. They are here on the Pacific Coast. They can go no further West. And the reckless abandon with which we are mowing down our Pacific Coast forests, the wastes which are being left behind, make the early day measurement of "waste" seem trivial. Each year, for many years, we have left in the path of the logger thousands upon thousands of cords of usable wood. At our sawmills more thousands of cords have gone into the burners. Waste? No, not exactly.

In a sense, the Western hemlock tree which is knocked down in the forest, when the better logs are taken out, does not represent a waste because it will not, ordinarily, under present circumstances, repay the logger for time and money expended. But a true picture of conservation and the welfare of the Pacific Coast must take in the future as well as the present. Perhaps the market will not absorb these poorer trees today, but let us not forget that it required 50 or 100 years to grow these same trees. We are going to need those trees badly tomorrow.

To return to the analogy of the man who wasted the water in his soaked clothes. We see a comparison in the terrific wood waste of the Pacific Coast. It is a case of circumstances. There exists a waste in the sense that there is not full utilization, but lacking an economic need for this unused wood, there has been no waste.

Excuses which justified the past do not hold good today. With the growth of the pulp and paper industry on the Pacific Coast a use is rapidly being found for much of this waste. A change of thought is coming about. And with the change of thought we are acquiring a new definition for the word "waste" as applied to Pacific Coast logging and lumbering operations.

Last month the Pacific Logging Congress met in Portland and gave valuable hours to discuss "Pulp and the Logging Industry." Pulp! Pulp? Here was a new element, regarded with all shades of feeling from welcome as an ally to fear as an enemy. The loggers listened to several views, views of the pulp man, of the timber owner, of the logger, all of whom stressed the importance of this newcomer, pulp, and urged the logger to study it and set the house in order because it was here to stay.

On the same day a group of pulp and paper men met at Seattle in the first Pacific Coast conference of the industry. They, too, listened to carefully prepared addresses on matters of waste in woods and mill.

The addresses delivered at these two meetings represent the changing light with which the Pacific Coast is coming to regard wood waste. Several of these addresses are reproduced in the current issue of PACIFIC PULP & PAPER INDUSTRY. Others will appear in subsequent numbers. They show the way the Pacific Coast is changing the definition of the term "wood waste." If you are interested in the dollars and cents angle of this new definition you will digest carefully what these leaders in thought have said.

Utilization of Sawmill Waste for the Manufacture of Wood Pulp*

By COL. W. B. GREELEY

Secretary-Manager, West Coast Lumbermen's Association

THE use of sawmill waste for the manufacture of pulp, in the Pacific Northwest, has long passed the pioneer stage. It is well developed in the case of spruce and hemlock because of the excellent pulping qualities of these species and their adaptability to all three of the leading processes, that is for ground-wood, sulphite, and sulphate pulps.

The use of Douglas fir mill waste is thus far limited to three or four plants manufacturing sulphate pulp and two plants which mix it with other species in the manufacture of soda pulp.

The yields of pulp chips from sawmill waste in current practice vary widely between different mills because of their varying situation and policy in the manufacture of lath, box shooks, and like products, in the disposal

feet of lumber. This form of utilization probably adds from 20 to 25 per cent to the yield of pulping material.

As a general average for the West Coast hemlock mills, it is probable that about 1/3 of a unit of pulp chips is now obtained from each thousand board feet of logs manufactured, through the utilization of mill waste and low grade lumber for this purpose.

An equal yield of pulp chips is probably attainable, on the average, from the conversion of Douglas fir mill waste if all slab wood is utilized for this purpose rather than fuel in one form or another. One plant is now using some cedar in the manufacture of sulphate pulp, and this species may also be regarded as a potential source of raw material for an expanding pulp and paper industry in the Pacific Northwest.

The cut of hemlock and spruce saw timber in the Pacific Northwest, including British Columbia, in 1927 was approximately 2,240,000 board feet; while the cut of Douglas fir and cedar saw timber was approximately 10,170,000 board feet. At an average yield of 1/3 of a unit of pulp chips from each thousand feet of logs manufactured, we may thus estimate a theoretical supply of raw material for the pulp industry, in the form of mill waste and low grade lumber, of about four million units annually. Accepting the ratio of two units of chips for each ton of manufactured pulp, this raw material would be sufficient, were it actually available for the purpose, to produce about two million tons of pulp annually. Approximately 1/6 of this total would consist of pulps for which spruce and hemlock are adapted; while 5/6 would constitute the pulps for which the utilization of Douglas fir and Red cedar proves feasible.

Cost of Assembly

It will, of course, be readily understood that any such figures on pulp material supplies available from mill waste picture a theoretical maximum, not the quantities of wood actually available to the pulp industry. The geographical location of many sawmills will doubtless exclude them as a practicable sources of supply for the pulp industry for at least some time to come; and the wide spread use of mill waste for slab fuel and hog fuel will probably always materially restrict the volume of mill waste economically available for the manufacture of pulp.

Other economic factors have an important bearing upon the limits of cost within which mill waste can be assembled from widely distributed sawmills for the production of pulp. The pulp industry on the West Coast is already utilizing directly large quantities of logs. Five plants in the Columbia River district reported to the West Coast Lumbermen's Association the use of approximately 17,000,000 feet of hemlock, spruce and White fir logs for pulp during the month of August. The use of round cord wood cut from small timber or logging waste is also well established. The econo-

HIGH POINTS FROM COL. GREELEY'S ADDRESS

Based on the 1927 cut in the Pacific Northwest, including British Columbia, of hemlock, spruce, Douglas fir and cedar saw timber we may estimate a theoretical supply of raw material for the pulp industry enough to produce about 2,000,000 tons of pulp annually.

The economics of raw material supply for the pulp and paper industry in the Pacific Northwest are now in the process of development in several directions.

One of the greatest boons to the forest industries of the West Coast would, and undoubtedly will, be realized in a further technical development of pulping processes to afford a wider outlet for the still enormous quantities of unutilized Douglas fir waste.

The pulping industries provide the best solution yet offered for the utilization of wastes which have hitherto constituted one of the most serious drags upon the efficiency and prosperity of the lumber industry of this region.

I learned recently of one sawmill, of moderate size, which in 1927 realized nearly \$50,000 from the conversion of mill waste into pulp chips and hog fuel, material whose sheer disposal had previously cost a substantial figure.

of slab wood for fuel, and in the production of hog fuel. The actual yields reported under present methods of chip production at hemlock mills range from 1/12 to 5/8 of a unit of 200 cubic feet of chips per thousand board feet log scale of logs manufactured. One experienced operator puts the average yield at one unit of 200 cubic feet for each 4 1/2 thousand feet of logs manufactured at plants which operate lath mills, and at 2 units for each 4 1/2 thousand feet of logs at plants which do not produce lath. The yields from spruce mill waste run somewhat lower because of the relatively close utilization of this species for lumber products.

At a number of hemlock mills, the No. 3 Common lumber is now converted into pulp chips, producing about one unit of 200 cubic feet per thousand board

*Paper read by Col. Greeley at the Pulp and Paper Conference, held at the School of Forestry, University of Washington, Seattle, October 26, 1928.

mies of raw material supply for the pulp and paper industry in the Pacific Northwest are now in the process of development in these several directions, necessarily controlled by the relative costs of the different classes of material when reduced to pulp chips as well as by the quality of the pulp produced and other factors connected with the particular process or operating program of the individual pulp plants.

I was advised at one Puget Sound sawmill that the conversion of its No. 2 common hemlock lumber into pulp chips is now under consideration. This is a further indication of the many ramifications which the quest of the pulp industry for suitable and economical supplies of raw material will take as its development progresses. In this progression, there will undoubtedly be a further and more complete utilization of sawmill waste for the various grades of pulp, finding its proper place along with the direct conversion of logs into pulp chips, of low grade lumber, and of round wood from the logging camps.

Douglas Fir a Problem

One of the greatest boons to the forest industries of the West Coast would, and undoubtedly will, be realized in a further technical development of the sulphate and soda pulping processes, and doubtless others as well, so as to afford a wider outlet for the still enormous quantities of unutilized Douglas fir mill waste. With the extensive research now under way, future progress in the manufacture of kraft pulps from Douglas fir will undoubtedly materialize. From the standpoint of more complete and better correlated use of the forest grown materials available in the Pacific Northwest, this is one of the most important fields for further advance.

It is, of course, an obvious remark that the development of the pulp and paper industry on the northern Pacific Coast is, from all standpoints, a most promising phase of progress in the present utilization and also in the future perpetuation of its forest resources. The pulping industries provide the best solution yet offered for the utilization of mill and logging wastes, not convertible into lumber products, which have hitherto constituted one of the most serious drags upon the efficiency and prosperity of the lumber industry of this region. The progress of forest industries the world over, in financial returns, stability, and opportunity to reproduce their raw materials through the practice of forestry has been coordinate with the degree of utilization of forest grown materials attainable and upon the correlated, and integrated, use of such materials



Not many months ago Col. W. B. Greeley resigned as Chief of the U. S. Forest Service to take up the tangled affairs of the lumber industry in the Douglas fir region of the Pacific Coast. As Secretary-Manager of the West Coast Lumbermen's Association Col. Greeley holds the unique position of perhaps being more closely identified with the Pacific Coast lumbering industry than any other one man, and at the same time he is detached from it so that the perspective is not destroyed. The remarks embodied in this article give the reader the benefit of that perspective and are well worth the careful study of every one whose business in life is founded upon the great forest resources of the Pacific Coast.

for a variety of commercial products. The more rapidly the forests of the West Coast pass beyond the "one-product" stage of industrial development, the more rapidly will the many problems surrounding the financial success and permanence of the industrial structure based upon these forests be solved.

Whether the so-called "by-products" of our sawmills and logging camps prove to be more remunerative than their lumber, as has been true in the case of other large industries, or not—the development of the pulp and paper industry cannot fail to increase the returns to the timber owner, logger, and lumber manufacturer and thereby to put greater financial strength and stability into the whole industrial structure. I recently learned of one sawmill, of moderate size, which in 1927 realized nearly \$50,000 from the conversion of mill waste into pulp chips and hog fuel, material whose sheer disposal had previously cost a substantial figure.

Even today, the conversion of low grade logs and of low grade lumber into pulp chips is beginning to relieve the over-production of lumber at West Coast sawmills, directly in the grades which do not normally return the cost of production. This may in time attain sufficient proportions to become a positive relief in solving the most fundamental problem of the West Coast lum-



Pacific Coast Sawmills Tolerate Enormous Wastes

(Turn to page 32)

Pulp Conference Well Attended

Move Made Toward Organization of Technical Association on Pacific Coast

INDUSTRY and education sat down together at a pulp and paper conference held in Seattle on October 26 at the invitation of the University of Washington. The committee in charge of the conference was highly pleased with the attendance, both from the standpoint of numbers and diversity. The way was paved at the meeting also for the formation of a technical association on the Pacific Coast for the pulp and paper industry.

A total of approximately 100 people attended the conference. Included in this number were representatives from a majority of the mills in British Columbia, Washington and Oregon, engineers and equipment men allied with the industry, foresters, educators, and others interested in the Coast industry in a general way.

The program went off smoothly throughout all sessions. Only one scheduled paper was not delivered. That one was on the subject of "Mill Control," by Dr. E. Richter, chemist at the Port Alice mill of the B. C. Pulp & Paper Co. Ltd. Dr. Richter's paper was delayed in the mails and arrived too late to be presented, but will be published later in PACIFIC PULP & PAPER INDUSTRY. The only other deviation from the program came in connection with Vance Edwardes' paper on "Mill Research." Mr. Edwardes was unable to attend in person and his paper was read by Wm. Breitenbach, chemist at the Rainier Pulp & Paper Co., Shelton, Wash.

Surprising Facts About Waste

The meeting was opened with a few remarks of welcome by President M. Lyle Spencer of the University of Washington. Dr. Spencer said that the university recognized the importance of the pulp and paper industry on the Pacific Coast and wanted to work with the industry. He welcomed the visitors and told how the Washington Newspaper Institute had profited by annual meetings and the associations afforded. He told how the Institute had grown from an initial attendance of only 11 men to an attendance last year of more than 400 people.

The morning session, devoted largely to the raw material side of the industry, brought out two interesting papers. The first of these, "Logging Waste for Pulp Wood," delivered by A. L. Hodgson of the U. S. Forest Service, related the high points of a study of logging waste which Mr. Hodgson and associates have been conducting for the past two and one half years. This study embodied some highly exacting field work in which the logging waste on 150 sample acre plots in 24 representative logging operations in the Douglas fir region were measured for actual waste after logging. Among other things Mr. Hodgson said that the study had shown that 6,500,000 cords of sound wood are being left in the forests annually under present conditions of logging. When finally published as a government bulletin the report will cover more than 100 pages and be replete with tables and illustrations. The address delivered at the conference will be published in a future issue of PACIFIC PULP & PAPER INDUSTRY.

The paper on "Sawmill Waste for Pulp Wood and Fuel," by Col. W. B. Greeley, secretary-manager of the

West Coast Lumbermen's Association, was the high light of the morning session. It is reproduced in full in another part of this issue.

In the afternoon session the university demonstrated one of the problems it has taken up as research when W. L. Bueschlein of the Department of Chemical Engineering gave a paper on "The Cooking of Douglas Fir with Sulphite Solution," illustrating the findings with charts.

A feature of the afternoon session was a discussion on "The Relation of the U. S. Forest Products Laboratory to the Pulp and Paper Industry," by C. C. Heritage, in charge of the pulp and paper section of the laboratory. Mr. Heritage, with Mr. C. P. Winslow, director of the laboratory, has just made an extensive survey of Pacific Coast conditions. Mr. Heritage came back to Seattle from California to attend the conference. He had planned originally to return to Madison by way of the southern route. Mr. Heritage's address was illustrated with slides to show some of the types of work undertaken by the laboratory and a few views were also shown of the laboratory and equipment.

The afternoon session concluded with a paper by D. B. Davies, of the Rainier Pulp & Paper Co., Shelton, on "Training Schools in Pulp Mills." Mr. Davies, who acted as chairman of the afternoon session, told of some of his experiences with schools in mills he had been associated with in Wisconsin. Mr. Davies' paper was followed by a report from Myron Black of the Inland Empire Paper Co., Millwood, Washington, who had attended the fall meeting of TAPPI held at Wausau, Wisconsin, in September. The conference was then thrown open to discussion on training problems.

Favor Coast Technical Association

After lunch and before the afternoon session the visitors made a tour of the building devoted to the Department of Chemistry and Chemical Engineering, evidencing a considerable interest in the actual paper and pulp mill studies the students were carrying out on a laboratory scale. A similar tour of the College of Forestry facilities was conducted following the afternoon session.

The banquet in the evening brought the conference to an enjoyable conclusion. Lloyd Spencer of the Seattle Post-Intelligencer acted as toastmaster and kept the crowd in good humor with his repartee and story telling, bringing to the occasion his capacity to entertain gained some years ago on the vaudeville stage. Following a few very brief talks the banquet was concluded. Those interested in the formation of some permanent technical organization were asked to remain for a post-banquet session.

The greater majority of those attending the banquet remained for the session following. This meeting resolved itself into an informal open discussion, with Dr. H. K. Benson, as chairman of the committee in charge of the conference, acting as chairman. A number of those present volunteered their opinions and the general sentiment favored formation of some kind of permanent technical association on the Pacific Coast. No objections to formation of an association were

voiced. The question as to the form of association desired brought out some discussion and of the two organizations, TAPPI and the American Pulp & Paper Mill Superintendents' Association, the former was favored because of the wider range for membership which it offered. The general sentiment highly favored the principle of organization and the benefits it afforded to all through contact and exchange of experience.

B. T. McBain, as an officer of TAPPI, when called upon by Dr. Benson, stated that in correspondence with members of the Executive Committee of TAPPI all except one had expressed themselves in favor of having a division of TAPPI formed on the Pacific Coast. The member not heard from was R. H. Laftman of Bogalusa, La., who was in Europe, and his approval was expected upon his return.

Dr. Benson read a letter, dated October 9, from W. G. MacNaughton, now engineer with the News Print Service Bureau and formerly secretary of TAPPI, to Mr. McBain. The letter, which outlines a procedure under which a Pacific Coast organization might be formed, follows:

In regard to the coming meeting in Seattle called by Prof. Benson, Dept. of Chemical Engineering, University of Washington, I read the notice in the PACIFIC PULP & PAPER INDUSTRY magazine with interest, particularly as I had a number of talks with members of the Technical Association while on the Pacific Coast in regard to the same matter. It was the opinion of H. A. Lundberg, Seattle; R. J. Schadt, Oregon City; S. Norman, Newberg, Oregon, and others, that it would be extremely advisable if a permanent organization were formed for it to have a close relation to the Technical Association. I agree with you that if it could be developed it would be a very good thing for the paper industry on the Pacific Coast, particularly if it maintains its connection with the Technical Association as a local section.

The provision for sections in the articles of organization of TAPPI does not obligate either the section or the Association in a financial way, and the only requirement indicated is that the officers of the section be members of TAPPI. All the other members of the local organization would be provided for according to their own wishes. In other words, my recollection is that at the request of fifteen members, perhaps less, of TAPPI, an organization of Technical men would be recognized as a local section. The dues to cover the expenses would be fixed by the local organization itself, and the members would be admitted independently of the Technical organization on their own vote.

Since at the present time there are no local sections so far as I know, although a few years ago there was one in the Miami Valley, it might be possible for the TAPPI Executive Committee to make some provision whereby a closer relation might be established, perhaps through remitting a portion of the TAPPI membership dues to the local section. However, I would strongly approve your urging that the local organization, if formed, maintain a close relation with the Technical Association.

A suggestion was made that a committee be appointed at once to organize an association, but this procedure was abandoned upon the suggestion that some of the mills were not represented and that the idea ought to be put up to all at the same time. The following resolution was adopted:

Resolved, That the chairman be authorized to invite each of the operating pulp mills to designate a representative to serve on a committee to work out plans for future meetings and conferences of the pulp and paper industry on the Pacific Coast.

Invitations are to be sent out at once, Dr. Benson stated after the meeting.



Pulp and Paper Conference Held at the University of Washington, Seattle, on October 26. Photo Taken in Anderson Hall at the Close of the Afternoon Session.

Those who registered at the conference were:

George B. Allen, Vancouver, B. C.; J. L. Alexander, College of Forestry, U. of W., Seattle; W. M. Bain, Crown Willamette Paper Co., Camas, Wash.; H. K. Benson, Dept. of Chemical Engineering, U. of W., Seattle; W. L. Beuschlein, Chemical Engineering Dept., U. of W., Seattle; P. W. Bielfeldt, Swenson Evaporator Co., Tacoma; Myron W. Black, Inland Empire Paper Co., Millwood, Wash.; W. E. Breitenbach, Rainier Pulp & Paper Co., Shelton, Wash.; E. P. Brennan, B. C. Pulp and Paper Co., Ltd., Woodfibre, B. C.; H. J. Carswell, Hawley Pulp & Paper Co., Oregon City, Ore.; C. P. R. Cash, Cascade Paper Co., Tacoma; Joseph J. Cloud, Grays Harbor Railway & Light Co., Aberdeen, Wash.; Andrew K. Cochran, Cascade Paper Co., Tacoma; F. Leonard Cooper, Braun-Knecht-Heimann Co., San Francisco; N. W. Coster, Fidalgo Pulp Mfg. Co., Anacortes, Wash.; George Cropper, Washington Pulp & Paper Corp., Port Angeles, Wash.

D. B. Davies, Rainier Pulp & Paper Co., Shelton, Wash.; R. M. DeCew, Fibreboard Products Inc., Sumner, Wash.; E. G. Drew, J. O. Ross Engineering Corp., Portland; A. V. Eastman, Dept. of Electrical Engineering, U. of W., Seattle; L. S. Edwards, Electric Steel Foundry, Portland; R. C. Erchinger, Doran Co., Seattle; C. B. Everitt, Fidalgo Pulp Mfg. Co., Anacortes, Wash.; H. M. Ford, Northwestern Pulp & Paper Co., Portland; Stuart M. French, Edmonds, Wash.; Harold T. Fretz, Cascade Paper Co., Tacoma; Leo Friedman, Dept. of Chemistry, U. of O., Eugene, Ore.; John Fulton, Dept. of Chemistry, Oregon State College, Corvallis, Ore.; S. Geijsbeek, Gladding, McBean & Co., Seattle; Paul J. Geise, Booker & Co., Seattle; Thomas M. Gibbes, Puget Sound Power & Light Co., Seattle; Frederick W. Graham, Great Northern Railway, Seattle; B. L. Grondal, Dept. of Forestry, U. of W., Seattle;

J. E. Hanny, Crown Willamette Paper Co., West Linn, Ore.; J. W. Harader, Chamber of Commerce, Bremerton, Wash.; E. S. Harrar, College of Forestry, U. of W., Seattle; C. T. Henderson, Great Western Electro-Chemical Co., San Francisco; J. E. Hedin, Union Bag & Paper Power Corp., Tacoma; C. C. Heritage, Forest Products Laboratory, Madison, Wis.; P. Hetherington, The Longview Co., Longview, Wash.; D. R. Hettelsater, Folwell Engineering Co., Seattle; Walter S. Hodges, Portland; Allen H. Hodgson, U. S. Forest Service, Portland; John H. Hoffman, Foster Wheeler Corp., San Francisco; Wm. Howarth, Everett Pulp & Paper Co., Everett, Wash.; J. D. Hull, Mechanical Engineer, Seattle; Dick Jesse, Chamber of Commerce, Bremerton, Wash.; W. L. Ketchen, B. C. Pulp & Paper Co., Port Alice, B. C.; Lawrence Killam, B. C. Pulp & Paper Co., Vancouver, B. C.; J. W. Lang, Dept. Chemical Engineering, U. of W., Seattle; Fairman B. Lee, Asbestos Covering & Supply Co., International Filter Co., Seattle; I. Lubersky, Fibreboard Products, Inc., Portland; A. H. Lundberg, G. D. Jenssen Co., Seattle; Stanley D. Lyle, Seattle;

B. T. McBain, Portland; Vernon McKenzie, Dean Journalism School, U. of W., Seattle; B. T. McMinn, Dept. of Mechanical Engineering, U. of W., Seattle; W. C. Mumaw, Grays Harbor Railway & Light Co., Aberdeen, Wash.; Arthur Neale, Industrial Dept., Seattle Chamber of Commerce, Seattle; Robert A. Osborn, Dept. of Chemistry, Oregon State College, Corvallis, Ore.; C. A. Palmer, Dougall Woodfibre Co., Edmonds, Wash.; William C. Palmroth, Seattle; C. A. Pitchford, Aberdeen Lumber & Shingle Co., Aberdeen, Wash.; R. A. Sipes, Oregon City, Ore.; Ray Smythe, Willamette Iron & Steel Works, Portland; John W. Southworth, Everett Pulp & Paper Co., Everett, Wash.; C. R. Stanton, Seattle; Herman V. Tartar, Dept. of Chemistry, U. of W., Seattle; R. K. Tiffany, State Hydraulic Engineer, Olympia, Wash.; Thomas G. Thompson, Dept. of Chemistry, U. of W., Seattle; H. V. Vernet, Oliver United Filters Inc., San Francisco; S. C. Watkins, Supt. Water Dept., Aberdeen, Wash.; Wm. T. Webster, J. O. Ross Engineering Corp., Tacoma; W. R. Weill, Pacific Coast Supply Co., Seattle; A. R. White, Tacoma Electrochemical Co., Tacoma; L. R. Wood, Union Bag & Paper Power Corp., Tacoma; L. L. Zodtner, Tacoma Electrochemical Co., Tacoma.

Editor's Note—A few of the papers presented at the first pulp and paper conference held at the University of Washington on Oct. 26 are reproduced in this issue of PACIFIC PULP & PAPER INDUSTRY. Other papers will appear in the December and subsequent issues.

Preparing For Annual A. P. & P. A. Meet

The fifty-second annual convention of the American Paper & Pulp Association and its affiliated organizations will be held at the Waldorf-Astoria Hotel, in New

York City, next February 18 to 21, inclusive. The association's staff is already working on the many details of this annual get-together of paper men from all over the United States.

Commissioner W. E. Humphrey, chairman of the Federal Trade Commission, has accepted President Everest's invitation to address the afternoon session of the association's annual business meeting, and will speak on the commission's trade practice conferences as a means of helping business to eliminate unprofitable and unfair methods of competition.

Another interesting feature of the afternoon session of the association's annual business meeting will be an address by Dr. Charles H. Harty, on the future of the cellulose industry. This address will be especially interesting to the technical and administrative officials of the industry. Dr. Harty is a fluent speaker and will tell of the marvels and future possibilities in the use of cellulose.

The morning or business session of the American Paper & Pulp Association's annual meeting will be devoted largely to discussion of the report to be presented by the association's committee on development. This committee was authorized at the association's last annual meeting for the purpose of studying the possibilities of further coordination of the cooperative activities of the industry. Under the leadership of Col. B. A. Franklin, of the Strathmore Paper Co., the committee is investigating these fundamental problems of the industry most exhaustively and expects to submit its report to the executive committee of the association well in advance of the annual meeting, so that their recommendations may then be taken up by the various branches of the industry and action assured at the annual meeting of the association next February.

The merchant's association, the National Paper Trade Association, will be in session at the same time, as well as the service organizations of the industry—The Technical, Cost and Salesman's Associations. Many, if not all, of the American Paper & Pulp Association's affiliated associations will hold meeting at the Waldorf during this week. It is suggested that paper companies make early hotel reservations as the facilities will be taxed during convention week.

Utilization of Sawmill Waste

(Continued from page 29)

ber industry; namely, that of adjusting its production to the requirements of available markets.

The development of the pulp and paper industry, furthermore, with the capital investments attending it and the interest in permanent supplies of raw material, also promises to create a powerful economic incentive for commercial reforestation in the Pacific Northwest. This region will not be the first where the feasibility of growing stands of pulp wood in relatively short periods has proven the entering wedge for industrial forestry. From this long-time viewpoint, as well as from its immediate contributions to a solution of the industrial problems of the region, the sound development of pulp and paper manufacture is of the greatest promise to all of the interests of the Pacific Northwest identified with its forest resources.

Inspects New Grays Harbor Water Line

John Cunningham, official of the Barr & Cunningham firm of engineers, which built the water line for the Grays Harbor Pulp & Paper company's pulp mill, visited Grays Harbor late in November and inspected the pipe line.

Pacific Loggers Hear About Pulp

THIS year when the Pacific Logging Congress held its annual meeting in Portland October 24-27 the members listened to the pros and cons of the pulp industry as it bears on the logging and lumbering industry. Most of the Friday morning—October 26—session was devoted to papers dealing with the pulp and paper industry. One of these papers, by Mr. K. O. Fosse of the International Wood & Sulphite Co. is reproduced in full in this number of PACIFIC PULP & PAPER INDUSTRY.

On the section of the congress program devoted to "Pulp and the Logging Industry" J. J. Donovan, vice-president of the Bloedel-Donovan Lumber Mills, Bellingham, Wash., gave an address on "The Logger's Viewpoint." Mr. Donovan quoted some statistics to show the present dependence of the United States upon outside resources to take care of its paper and pulp needs, and pointed out the small share which the Pacific Coast at present has in the business. Pointing to the trend to using sawmill waste Mr. Donovan said, "We may safely say that within five years no spruce, hemlock or white fir mill waste of any value will go to the burner."

Urges Pulp Tariff

Mr. Donovan also pointed out the immense woods waste which has now been carefully studied by the U. S. Forest Service. Mr. Donovan said, "The stumpage owner insists on close logging and the mill objects to many logs as unfit for lumber. The pulp mill may relieve the situation."

"We (the Pacific Coast) have made a fair beginning in making pulp and paper. All material suitable for such use, whether in mill or woods, should be used."

In conclusion Mr. Donovan urged the institution of a pulp tariff to prevent dumping of foreign pulps in the American market.

In this discussion of pulp and the logging industry the "Timber Owning Points of View" were brought out in papers by E. T. Allen, secretary of the Western Forestry and Conservation Association, and Capt. John B. Woods of the Long-Bell Lumber Co., of Longview, Wash.

Raisin' Hell Up Hill

Mr. Allen's address looked into the future and sketched the trend of conditions in the Pacific Coast logging country. Mr. Allen brought out many excellent points, a few of which are repeated here:

"The problem of our Pacific Coast forest states is to keep the forest land working; affording wages to labor, revenue to support every professional and commercial element, market for agricultural products, and tax revenue to relieve all in the support of government roads, schools and other community costs."

"Carrying costs threaten to deter the forest land owner from keeping his land productive."

"The Pacific Coast's regional advantage for producing the nation's next saw timber from our fast growing Douglas fir and pines is improved rather than discounted by the proportion of species which now find a good outlet in pulp."

"Get your mind on methods that do not destroy these pulp values, but that take care of them, even if this violates some old beliefs that good logging is to get a bigger donkey and a heavier line and a longer crane than anybody else ever had and raise hell uphill with the big logs."

Capt. Woods summarized his views from the standpoint of the forester of a large lumber company. In his first remarks he said that he was interested in the proposition that the pulp industry in the United States needed tariff protection, and was equally interested to see leaders of the industry moving to crystallize the need through proper channels. Some of the high points from his address follow:

"Mill waste is successfully used for pulp only when handled in large units where due attention can be given to the technical problems involved in such salvage."

Bigger Trees In Less Time

"There seems to be a good big market in this country for pulp products and our lot would be quite pleasing if domestic production could claim its proper and logical share of such markets."

"Use of pulpwood from the forest must grow along three lines: first, pulping of logs that can be taken out with timber logging; second, relogging for stuff that would be left ordinarily; third, pulpwood logging on thin stands or in forest thinning."

"We can produce bigger trees in less time here than in either East or South."

R. W. Vinnedge of North Bend, Wash., was reelected president of the Congress. J. H. Meister of Bend, Ore., was reelected vice-president, and Archibald Whisnant, Portland, was reelected secretary. Seattle was chosen for the 1929 convention city in recognition of the founding of the Congress at that city in 1909.

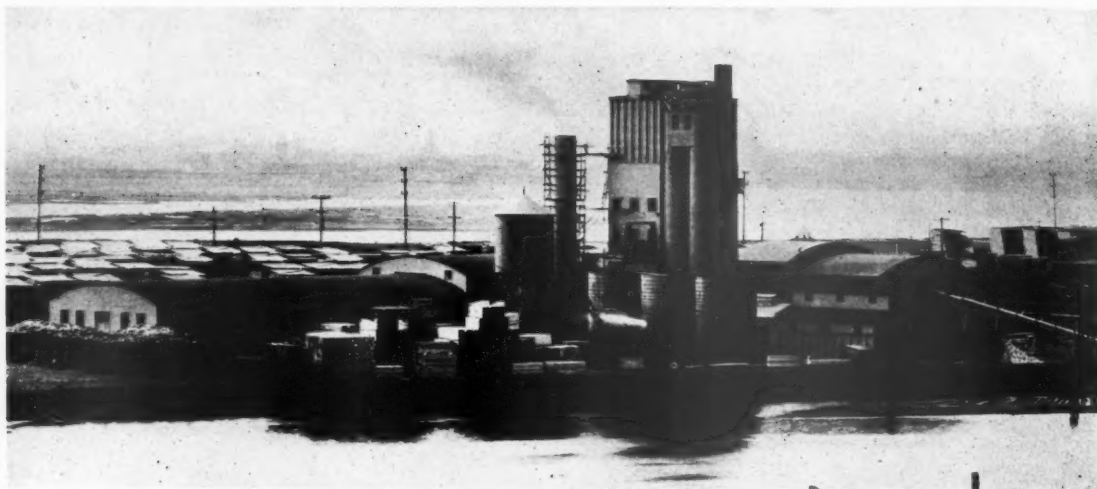
Spaulding Plans To Increase Capacity

C. K. Spaulding, president of the Spaulding Pulp & Paper Co., Newberg, Ore., returned last month from New York, where he conferred with brokers handling his product. The Eastern visit was made primarily to learn if he is justified in developing plans for the expansion program he has had in mind for some time.

"From a study of markets demanding a high quality pulp, I have definitely decided to increase our production," he said. "There are several factors to be taken into consideration before I can make a public announcement of plans, however. Until we have worked out a plan of financing, I would rather not discuss our plans."

Malcolm Is Sulphite Superintendent at Hawley

Homer Malcolm has been appointed sulphite superintendent at the Oregon City mill of the Hawley Pulp & Paper Co. He has been with the Hawley mill for about ten years, serving first as cook and later as night superintendent.



The Pulp Mill of the Shaffer Box Co. at Tacoma, Washington

Shaffer's New Sulphite Mill

Where the Wastes of Hemlock Cutting Now Go Into Pulp Manufacture

DURING the present month the city of Tacoma, Washington, will point to an idle refuse burner down on its extensive tide-flat area, where a goodly portion of the lumbering industry of the world is located. At the same time, the city will point to a sulphite pulp mill just going into production. The new pulp mill will be turning out 50 tons of unbleached sulphite daily, using for its wood the very material which used to go into that now idle burner and cost the company money, just for the burning.

To know the complete story of the new pulp mill of the Shaffer Box Co., one must know a bit about the company and the set of circumstances which led to the building of the mill. It must be first borne in mind that the Shaffer Box Co. is a combination sawmill and box lumber factory, cutting western hemlock exclusively. The average daily cut is about 200,000 f.b.m., or about 60,000,000 f.b.m. yearly.

There has been much said about waste, and much still remains to be said. One can secure any variety of figures, a circumstance which is largely due to the fact that no fixed definition of the term "sawmill waste" exists. In the case of the Shaffer Box Co., however, this very definite fact was known:

"It was costing the company \$6,000 per year just for upkeep on the big refuse burner."

This sum of \$6,000 took into consideration only the burner maintenance. It did not include cost of conveyors, handling, and other items necessary to get the refuse into the burner. Hemlock is a stubborn fuel, hard to burn. Burner costs at a hemlock mill and at a Douglas fir mill are two distinct things. Because of the low cost electric power rates available in the City of Tacoma, the company was not using its fuel for power, but was buying its current. It had always been possible to convert a portion, at least, of this waste to power purposes, but the low power costs made such practice nonfeasible.

Lengthy consideration of this waste problem eventually brought about the possibilities of diverting this waste wood to pulp manufacture. And after much more study on the waste question the okeh was put on the pulp mill idea.

In a plant such as the Shaffer Box Co. there are several sources of waste in handling the wood. In the first place hemlock logs often have blemishes in them which make them undesirable for lumber. The waste is reckoned starting with the log pond. Poor stuff is scaled out in the log measurement as far as possible. Just what is the amount of waste in breaking down the log into lumber is subject to a variety of opinions. There are slabs, edgings, short lengths and narrow widths, all of which have little or no value as lumber. This is the class of material which now will be diverted to the pulp mill. In addition to the waste in the sawmill the box factory contributed another 20 per cent in manufacturing box shooks from the lumber.

With the pulp mill operating, the Shaffer Box Co. will find a use for the waste and their manufacturing operations will consist of taking the log, converting as much of it as possible into hemlock lumber, converting the lumber into box shooks, taking the waste from both sawmilling and box manufacturing operations and diverting it to the pulp mill as much as possible and turning the remainder into steam for pulp mill—and to some extent sawmill—uses. The logs will be sorted in the pond and where feasible the low grade stuff will be diverted directly to pulp. Into the sawmill there has been built a wood preparation plant which will supply good wood to the pulp mill and refuse for the steam plant. The pulp mill proper really begins at the chippers.

The man who has had most to do with the wood preparation plant and whose job it will be to see that the pulp mill is supplied with wood is R. H. Pangborn, vice-president and general superintendent of the Shaffer Box

Co. The new department is largely his own design and several new types of equipment in the plant are to be credited directly to his inventive genius.

According to Mr. Pangborn, the pulp mill and steam plant will have an adequate supply of wood at all times. This matter, he states, has been carefully figured out.

The old steam plant has been enlarged with the addition of two 500 h.p. Stirling type water tube boilers, operating on 175 lbs. steam pressure. These will be fired with hog fuel, using hopper feed and inclined step grates.

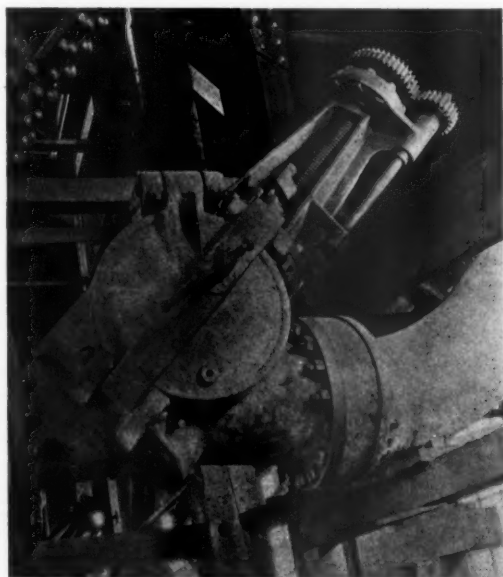
For steam purposes refuse will be gathered from all parts of the sawmill and box factory. This material will consist principally of sawdust, shavings, edgings and small stuff accumulated in the different wood preparing operations. The larger stuff needing reduction to hog fuel will be passed through two Summer 45-inch hogs. Fuel will be stored in a new bin 100x30x66 feet high. There are three sets of conveyor chain in both the top and the bottom of this bin to bring in fuel and to take it out. In passing, it is well to mention at this point that the conveyor chain used at the Shaffer plant has a cast-iron flight designed by Mr. Pangborn. These flights are connected with short lengths of chain and are removable, it being possible to change a flight in a few moments by lifting two keys. The flights have a flat bottom, so that in operation they slide flush on the bottom of the conveyor troughs and carry their load in a very thorough manner.

Three Sources of Wood

Pulpwood will come from three principal sources: first, outside slabs from the log; second, larger size edgings; third, the short and narrow lengths of lumber.

Group number three needs some explanation. Due to the frequent blemishes in hemlock these short lengths and narrow widths make up a goodly portion of the original log after the log has gone through the saws. In hemlock these shorts and narrows have very low value as lumber, but they are good for pulp material. This third group also includes the "shaky" boards, that is the low grade or No. 3 stuff.

Supplementing these three groups is the log pond,



The Doran Blow Valves Will Be Operated by Remote Control



Showing the Willamette Digesters in the Course of Erection

where sorting will be done and the poorer logs diverted to pulp if the waste material runs inadequate. When the round logs are used directly for pulp they will be broken down in the sawmill and run through the wood preparation room, the main parts of the log going direct to the chipping plant in the form of chunks about 10x10 inches.

Wood preparation includes all operations before the chippers with delivery to the conveyor leading to the chipping room. Barking, knotting, sorting, etc., will all be done in the sawmill. A crew of about 30 men per shift will be used in wood preparation. All pulp material coming from the sawmill will be picked over, the sound stuff going directly to the pulp mill, the small and bad stuff being returned to the steam plant.

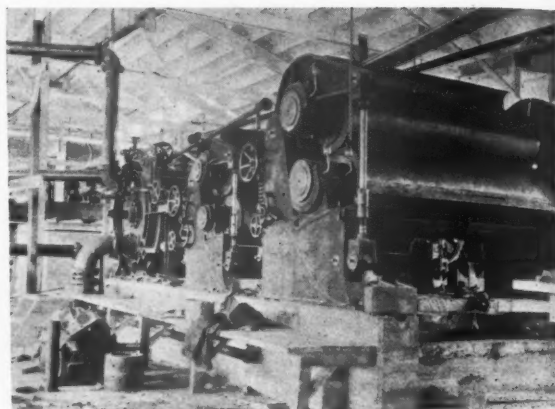
New Type Barkers

Next we find two machines of entirely new design, both being the inventions of Mr. Pangborn. There will be four rotary, or hollow cylinder, hand-operated, Pangborn barkers for edgings. These machines have a series of small curved knives mounted $1\frac{3}{4}$ inches apart around the inside of a cylinder, or ring, which is about two feet on the inside diameter. The center space is all clear. The ring with the knives rotates at 3,800 linear feet per minute. In operation the wood comes through to the man, overcoming the objection of some types of barkers which are said to be hard on the men. If necessary, two men can be used on each Pangborn cylinder barker, one feeding in from one side and the other pulling through.

Another new machine found in the Shaffer wood preparation plant is a Pangborn automatic slab barker. It is the first installation of its type. This machine has a series of 10-inch diameter by 2-inch thick planer heads arranged so that each head, as the wood goes through, engages with the curvature of the slab. The planer heads are staggered so that each one engages a different



The Machine Room Provides for Expansion. The Hesse-Ersted Baler Is Seen at the Rear, Before Installation



The Shaffer Pulp Mill Will Be the First Pacific Coast Sulphite Plant to Make Use of a Kamyrtless Wet Machine

part of the slab. Each planer head is directly coupled to a driving motor to form a unit, and each unit is swung on a free pivot so that the planer heads ride the slab with a fixed weight. On the same shaft as the planer head, but not coupled to the driven part, is a sprocket tooth which sinks into the bark and acts somewhat as a guide. The slabs are fed in from one end to pass under the series of planer heads.

As previously stated, the pulp mill proper begins at the chipping plant. The mill consists of a group of three principal buildings, a chipper room, acid plant, digester room and machine room. Heavy mill construction with vaulted roofs are used, the roofs employing a curved truss which permits dispensing with any supporting columns on the floor. Tile and concrete is used in the acid plant and concrete is used in the wet end of the machine room. Footings are of concrete sufficiently strong to carry a concrete structure.

The chipping room has two floors. The conveyor chain from the wood preparation plant delivers the wood to the second floor, where it is fed into spouts leading to two Smith & Valley three-knife, 64-inch chippers. Chips are then elevated to the second floor again to pass through three screens, the good material being conveyed on a belt-bucket conveyor to the chip loft. Rejects are diverted to a rechipper.

The acid plant is located near the company's dock to facilitate handling of limerock and sulphur directly

from scows. The sulphur storage room is fitted with a conveyor above, making the sulphur unloading an easy matter. The Glens Falls rotary sulphur burner occupies the room adjoining the sulphur storage. The acid plant is the regular G. D. Jenssen type with concrete towers, 8x90 feet, with a 100-ton capacity. The three acid recovery and storage tanks are made of Douglas fir. These have a storage capacity of 170,000 gallons of acid.

There are two digesters, made and installed by the Willamette Iron & Steel Work of Portland. Jack Mitchell, of the Willamette company, supervised the installation. The digesters are 16x51 feet and have a capacity of 13 tons per cook. They were lined by the Stebbins Engineering Co. The bronze fittings were made by the Doran Co. of Seattle. The blow lines are controlled by a geared blow valve, which is operated through a universal joint from the second floor.

Located outside of the digester house are two Douglas fir blowpits, each having a capacity of 2½ cooks. Adjacent to and above the blowpits is a wooden water storage tank. This supplies water by gravity through a 10-inch line directly to the blowpits for washing. The mill's water supply, incidentally, comes from the newly completed water line which the City of Tacoma has just completed to supply the industries on the tidelflat area.

The final unit of the pulp mill is the machine room. From the blow pits the stock flows by gravity to a supply tank to be pumped from there to Impco knotters with quarter-inch perforations. After passing the riffles, which are located on the upper level of the machine



Each Line of the Smith & Valley Flat Screens Has Its Own Fairbanks-Morse Motor and Texrope Drive



Lumber and Pulp Go Hand in Hand Here

room, the stock goes to six lines of Smith & Valley flat screens and a tailing screen with .009 cuts. Each line of screens has an individual Fairbanks-Morse electric motor with Texrope drive.

The rejects from the tail screen and the knotters will be refined and sold as stock for board and similar products.

Good stock passes through a washer to a 96-inch Kamyr feltless wet machine. This Kamyr installation is the first of its kind in Pacific Coast pulp mills, but it might be mentioned here that a similar installation has been made at the new sulphate pulp mill of the Union Bag & Paper Power Corp., also located on the Tacoma tideflat area, which will begin operation about the end of November.

The Kamyr press at the Shaffer mill has a cylinder mould and two presses of exceedingly heavy construction. The cylinder mould is equipped with a Nash vacuum pump and will deliver the sheet to the presses about 28 per cent dry. The presses will deliver a 55 per cent dry sheet to the Sargent shredder.

Drying is accomplished in two Fidalgo type dryers mounted in parallel lines. The machine room is sufficiently large for the installation of two more dryers.

At the end of the dryers is a heavy duty Hesse-Ersted mechanical baler, several installations of which have recently been made in Pacific Coast mills. Rail shipments will be loaded directly at the mill, while water shipments will be transported to the nearby Shaffer Terminal docks.

Nothing Further On Portland Board Mill

Plans for constructing a building for a board mill in Portland are shaping up rapidly, according to Max Goldberg, president of the Federal Paper & Board Mills, a new incorporation formed in September.

"As we haven't definitely decided between two probable locations, we can make no public announcement at this time regarding the development of the new local industry," Mr. Goldberg said. "We will decide on the site about the middle of the month."

The mill, which will employ 125 men, will have a daily capacity of 40 tons, according to present plans. The principals expect that the plant will be in operation early in January.

Nothing Further On Rice Straw Mill

No statement other than that the company was still working on its financing was forthcoming from President D. N. Thomson of the Pacific Coast Pulp & Paper Co., when asked early this month regarding the progress of the company's proposal to construct a pulp and paper mill at Richvale, Calif., for the manufacture of paper from rice straw. Mr. Thomson said only that the company "was making progress."

Fidalgo Makes Mill Improvements

The Fidalgo Pulp Mfg. Co. at Anacortes, Wash., has installed additional equipment for working up screenings which will be sold as such to manufacturers of board and other coarse products. The mill has a rated capacity of 45 tons of unbleached sulphite pulp daily.

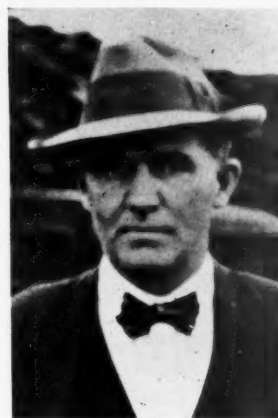
Australia Looks Into Paper Making

Chief Forester P. Z. Caverhill is now on his way back to British Columbia after attending the sessions of the Empire Forestry Conference in Australia. Topics discussed included the pulping possibilities of Australian woods.

Who Will Operate the Shaffer Mill?

Production of sulphite pulp at the new mill of the Shaffer Box Co., at Tacoma, will be under the direction of A. R. Shirley. The night superintendent will be Walter Clifford. Wood preparation will be supervised by R. H. Pangborn.

Mr. Shirley has been making sulphite ever since the start of the present century. He began his career back in Lincoln, Maine, in 1900. Later he was associated with the Burgess mills (now the Brown Co.) at Berlin, New Hampshire, and still later, he was with the Riordan mill at Hawkesbury, Ontario. In 1918, he came to the Coast and started the new mill at Port Alice, at that time the Whalen Pulp & Paper Mills (now British Columbia Pulp & Paper Co., Ltd.) and after a period there he went to the Swanson Bay, B. C., mill, which belonged to the same company. There followed a brief period of service at the Powell River, B. C., following which he put in five years of service at Ocean Falls, B. C., for the Pacific Mills, Ltd. He has always been engaged in sulphite manufacture and his experience covers all grades of this class of pulp.



A. R. SHIRLEY

Mr. Clifford has been associated with several of the Pacific Coast mills, among which are the Floriston, California, mill of Crown Willamette Paper Co., and also the Camas, Washington, mill of the same company.

Mr. Pangborn, whose duty it is to see that the pulp mill will have a supply of wood, has been around sawmills all of his life. He has a knack for the mechanical and several improvements in sawmill equipment are directly traceable to his ingenuity. One of the more recent inventions is a roller chain which is used on the sorting table of the sawmill. It is a device which considerably lightens the work of the men. Three other of his devices are mentioned in the description of the Shaffer mill in this issue of PACIFIC PULP & PAPER INDUSTRY.

The engineering of the new pulp mill was carried out under the supervision of L. A. DeGuere, who designed and supervised the construction. Mr. DeGuere last year established a western office in Tacoma. Most of his pulp and paper mill engineering work has been done in Wisconsin in the past quarter century or so. Local supervision of the Shaffer mill was carried out for Mr. DeGuere by S. J. Selden.

Other officers of the Shaffer Box Co. are Ralph Shaffer, president; F. C. Brewer, vice-president and treasurer, and E. A. Glueck, secretary.

Bremerton Looks Into Water Supply

The City of Bremerton, Washington, has recently been making some investigations of potential water supplies for industrial uses in the event a pulp and paper mill should look favorably on that section. The Skokomish River has been investigated. Bremerton is the seat of the Navy Yard in the Pacific Northwest. It is situated across Puget Sound from Seattle.

Logging and the Pulp Industry

The Relationship of the Wood-Using Industries From the Pulp Viewpoint

By K. O. FOSSE

President International Wood & Sulphite Co.

THE principle of full utilization of the timber removed from our forests is new to the logging and lumber industry on the Pacific Coast. In the Eastern states this has been a matter of grave concern for many years, but in this territory, aside from the comparatively insignificant



K. O. FOSSE

usage as a fuel, no constructive effort had been made along these lines until about three years ago, when the first plants were erected for the preparation of sawmill waste into material ultimately intended for conversion into wood fibre products.

This matter of full utilization is primarily one of conservation, and as such, we must consider it. The use of sawmill refuse or waste is an economic necessity to a community whose timber supply is inadequate for present needs and future generations. Every useable particle of material now going to the saw mill burners which could be saved without economic loss for the manufacture of lumber or pulp or any other of the forest products needed in our every-day life, is a positive theft from the future. It results in the necessity of cutting timber which otherwise might be conserved for the use and serious needs of our children's children. It is a crime against posterity.

The utilization of waste in the manufacture of pulp products does not mean curtailment of the logger's output. The preparation of standing timber of wood fibre manufacture is fundamentally a different process than logging. The preparation of logs for the saw mill presupposes delivery in the largest units (logs) which can economically be handled. The most desirable tract for

Here is a straight-from-the-shoulder talk on the relation of the logging and lumbering industries to the wood pulp industry. Speaking on October 26, before an assembly of hard-headed loggers, meeting in the annual Pacific Logging Congress, held at Portland, Mr. Fosse offered an answer from his experience on this inter-relationship of wood-using industries on the Pacific Coast. Attending the logging congress were men who wanted facts, men whose daily life consists of wrestling the stubborn resistance of Nature in the forests with brute machinery, while they keep an unceasing eye on the ledger and try to keep off the red. As president of the International Wood & Sulphite Co., whose business it is to supply a number of Pacific Northwest pulp mills with wood, Mr. Fosse occupies an unusual position of authority on the subject whereof he speaks.

logging, therefore, is fairly large timber of reasonable density. The logger's equipment is all designed with this end in view. His experience and the training of his men have all been in the use of heavy equipment in reasonably large timber.

The preparation of standing timber for pulp mills is rapidly ceasing to be a logging proposition. The yarding of bark and its transportation to the point of consumption is therefore a waste of labor and money which can easily be avoided in a pulpwood operation.

The pulp wood industry is in its infancy on the Pacific Coast and a great deal of improvement in method of operation will be made in the near future through the need for lower raw material cost.

Saves Standing Timber

Full utilization of forest products is of vast benefit to the logger in that it helps to perpetuate his business. For every 2,000 units of chips made from saw mill waste, one million feet of standing timber has been saved. When you consider the thousands of units of chips used per day in the pulp mills on the Pacific Coast, you can see that this will in a very short time run into a billion feet of timber. The saving thus affected is of the greatest importance to the logging industry because by just the amount salvaged from the saw mill waste we have reduced competition for standing timber.

The margin of saving accrues to the manufacturer of wood fibre through the use of saw mill refuse is very nominal. The cost of sorting and picking from the refuse chain is high. The cost of barking slabs, and other refuse and preparing the material for the chippers is excessive. The handling cost of delivering to the chipping machines the multitude of small pieces salvaged is surprising.

Close Supervision Required

The sum total is such that it is possible to deliver this material to the pulp mills at a price which will meet the competition of the pulp wood manufacturers only from selected mills having a large supply of suitable refuse and only then by users of waste who watch their cost very closely and who are handling a sufficient volume of business to enable them to operate on a very low cost basis and small margin of profit.

The business of manufacturing from saw mill waste material suitable for conversion into pulp is highly specialized. The problems, constantly arising, while probably no more complicated than those which you gentlemen of the logging industry are called upon to face, are new in nature and surprising in number.

The executive and administrative heads of a company salvaging saw mill waste for preparation into material suitable for the pulp mill must be able and willing to give their entire time and efforts to a personal supervision of all the details of the business and their best thought and attention to solving its problems.

Four principal points to consider in locating a pulp mill were brought out by Mr. Fosse in the discussion which followed his paper. The question had been raised regarding the feasibility of establishing inland pulp mills, due to the excessive cost encountered in transporting logging waste and other raw material over long distances. These four considerations are:

1. Transportation. Proximity to a railroad or tide-water is essential.
2. Power. Abundant steam and power must be available through manufacture or purchase.
3. Water supply. Pulp mills are large users of fresh water.
4. Raw material. Availability over a long period of years to justify the investment necessary.

Mr. R. W. Vinnedge, president of the Pacific Logging Congress, suggested the possibility of establishing chipping plants at strategical points where raw material from woods or mill justified and asked for comment. In answer to this, Mr. Fosse pointed out that the Washington Pulp & Paper Corporation has already planned such a chipping unit in conjunction with the woods operations of the company at Neah Bay, Clallam County, Washington. This was pointed out as a first step taken by the company to get nearer to the log for its raw material without using the sawmill as a medium.

President Vinnedge, commenting on Mr. Fosse's remarks, stated that these were days of transition and that the logging industry should now begin to adapt itself to the change which the pulp industry is causing.

Only where a company of this kind is doing a large volume of business so that it can afford to obtain the ablest supervision and administration can it hope for success.

The problem of salvaging the small and unsuitable timber for saw logs has been largely left to the loggers. Some of the Pacific Coast pulp operators have tried out the method of going over the ground after logging. The success or failure of this system of saving small and broken timber could hardly be determined by the limited experiments of the past.

Segregation of stands of small timber and logged by light and fast equipment, or possibly dealt with as a pulp wood operation, may prove advantageous.

There is but very little to be learned from the eastern or middle western operator. The method which has proven a success in that country would not be applicable here as the timber as well as the climatic conditions are entirely different.

In conclusion, permit me to stress to you one point: The operations of the logging industry and the business of the users of saw mill and logging waste are not competitive. They are complementary. Without the logger, there would be no saw mill waste with which to be concerned. Without the user of saw mill refuse, the full fruition of the efforts of the logger would not be realized.

A portion of the creative and operating genius of the logger, the physical strain of his men and machinery, the efforts of his executives and salesmen, the fruits of his time and money, would go up to the skies in smoke, an economic loss.

Co-operation between our industry and yours, sympathetic understanding of our mutual problems will ultimately bring about a proper solution beneficial to both.

Parks Joins Hawley Staff

Thomas Parks has assumed his duties at the plant of the Hawley Pulp & Paper Co. at Oregon City as plant engineer, having charge of all plant maintenance. Mr. Parks has as one of his assistants another new man in Hawleys, Mr. Buchard, who heads the mill wright crew. Both men have a long experience in paper mill work in the East.

Paper Mill Construction Started

With the pulp mill of the Grays Harbor Pulp & Paper Co. approaching full capacity and now running on a 24-hour a day schedule, interest in the Grays Harbor development now centers on the construction of the company's paper mill.

Well over 1,000 piling have already been sunk in the ground on which the new paper mill will rise on the Harbor. This site is immediately adjacent to the pulp mill. The piling are being sunk to a depth of 60 feet. Between 4,000 and 5,000 piling will be driven, practically giving the mill a solid foundation of piling. The piling are being sunk by the Owens Brothers, contractors of Port Angeles, while the mill proper will be built by Chris Kuppler's Sons of Port Angeles, builders of the pulp mill in Hoquiam.

Completion of the driving of piling was expected during November and the pouring of concrete about the piling was to start early in the month. The ground selected for the paper mill site is reported to be much firmer than was at first expected.

The permit for the construction of the first unit of the paper plant was issued on October 24 by the engineer of the city of Hoquiam, to Chris Kuppler's Sons, contractors. Cost of the first unit was estimated at \$150,000.

The company on October 26 started the work of filling a large slough which runs on an angle from Railroad avenue to Twenty-fifth street and which occupies a large area platted into private lots, streets and alleys. The entire slough is to be brought up to street grade and is expected to be used as auxiliary building sites of the company. The filling work is to be done in accordance with an agreement between the city of Hoquiam and the Grays Harbor Pulp & Paper Co.

Kelly Now Mill Manager at Hawleys

W. A. Kelly of Green Bay, Wisconsin, has been appointed mill manager at the Hawley Pulp & Paper Co., Oregon City. Mr. Kelly has held similar positions in other mills and has many years of practical paper making behind him. For the past eight years he was mill manager of the Northern Paper Mills, at Green Bay, Wisconsin, and prior to that he was for ten years with the Marathon Paper Mills at Rothschild, Wis.

Mr. Kelly's exact title, it is understood, is to be that of general manager and vice-president. This new arrangement will relieve some of the routine executive duties from the shoulders of Willard P. Hawley, Jr., who is now to be executive vice-president. Mr. Hawley has been vice-president of the Hawley Pulp & Paper Co. and also vice-president of the St. Helens Pulp & Paper Co., at St. Helens, Ore. Mr. Hawley has served also as general manager of the Oregon City mill since 1919.

Colorado Paper & Pulp Mill Still Unsold

The Colorado Pulp & Paper Co. mill passed by another sales day still unsold. Under a district court order, the mill has been put up for sale at a stated uplift price of \$300,000 several times in the past year since it has been under receivership. At the latest date set for sale—October 18—one bid was received, but since it was below the uplift price could not be considered. Meanwhile the mill under the receivership of George W. Beck is said to be operating at a profit and consequently stockholders are not particularly worried at the failure of officers to close a sale of the mill. The next date set for the receiver's sale is December 18.

An Improved Recovery and Cooking Process

Pumping Hot Acid Into the Digester Is Shown to Effect Savings In Several Directions

By A. D. MERRILL
Stebbins Engineering & Mfg. Co.

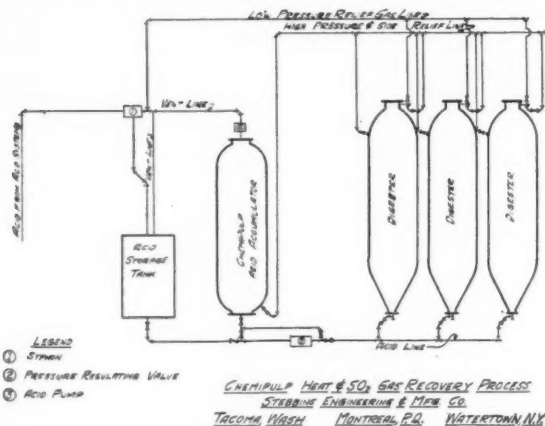
IN 1866 and 1867 Benjamin C. Tilghman first brought out the sulphite process. In 1876 the Swedish chemist, Edman, developed a process of cooking wood by a magnesium bisulphite solution, and at about the same time A. Mitscherlich developed the process which now bears his name for the production of sulphite pulp by the method of indirect cooking. Eugene Ritter and Carl Kallner of Austria brought out the present quick cook bisulphite process in about 1878. Since that time the sulphite process has been operated by two distinct methods, the Mitscherlich or indirect cooking method, producing, due to its longer cook and lower temperature, a stronger pulp but a higher conversion cost, and the Ritter-Kellner or quick cook

The result of recovering the gases by the method indicated are that the strength of the acid is higher than when the gases are cooled. The temperature of the cooking acid before being pumped into the digester is from 175° to 190° Fahrenheit. Further, the ratio between the combined and the free SO₂ in the cooking liquor is more accurately controlled.

In pumping the hot acid into the digester not only is it possible to save considerably on the cooking time, but also the maximum temperature reached is lower than by the old method, and further there is a better penetration in one hour's time in using the hot acid than is obtained after the digester has been under pressure for three hours and a half by the old method of cooking.

All of the above advantages result in a lower steam consumption, a lower sulphur consumption, a lower limestone consumption, and a higher yield of a stronger pulp.

We are giving below a comparative table of the old method and the new Chemipulp Process, which is based on very conservative data. Under the old method we have listed the average results obtained by this method of cooking and recovering not theoretical, but actual results obtained in the mills now using this process.



method, which is in most universal use, producing a pulp not as strong as the Mitscherlich pulp, but at a much lower cost.

In both the Ritter-Kellner and the Mitscherlich processes it has been customary to recover the gases vented off during the cooking process by first cooling same so that these gases would be more readily absorbed in the acid recovery tanks.

Since the quick cook method was first devised by Ritter and Kellner all operators of sulphite plants have desired a more economical process so that it would not be necessary to cool the gases down and then add an extra amount of steam later to heat the liquor after same was placed in the digester.

This has been accomplished by a new method in use in several of the Eastern mills, and the only fundamental difference is that this new method, known as the Chemipulp Heat, Gas and Liquor Recovery and Cooking Process, employs a pressure vessel, known as an Acid Accumulator. By the use of this Acid Accumulator the hot gases and liquors are recovered without cooling and stored up in the Acid Accumulator for use in the following cooks. This is accomplished in accordance with the flow sheet shown accompanying this article.

Old Method	Chemipulp Process	Savings
7200 lbs. Steam	4200 lbs. Steam	3000 lbs. at 20c.....\$.60
280 lbs. Sulphur	220 lbs. Sulphur	60 lbs. at 1¼c......75
380 lbs. Limestone	320 lbs. Limestone	60 lbs. at \$4 per ton..12
45% Yield (Weight basis)	50% Yield	5% Increase at \$40 2.00
Due to better strength mills are using 5% less sulphite in News furnish—5% at a \$20.00 differential.....1.00		

Total Savings per Ton.....\$4.47

In addition to the direct money saving advantages given above, there is a further advantage, especially when using wet chips, as the acid under the Chemipulp Process of recovery and cooking is of a higher strength and not so much steam has to be admitted to cook this pulp, which results in a less dilution of the acid during the cooking process. Further, under all conditions, the screenings are much lower by the Chemipulp method (averaging about 1½%) than they are under any other method now in use.

In the event the pulp is to be bleached, there is a further saving as the bleach consumption by this new method normally runs from 25% to 30% under that required when cooking by the old method.

Under present conditions, quality in the final product is imperative, as not only are the mills which produce the highest quality pulp running more steadily, but also they receive a higher price for their product.

International Wood & Sulphite Reincorporates

The International Wood & Sulphite Co. has filed a decree of dissolution as a Washington corporation and has reincorporated under the laws of Delaware with a capitalization of \$500,000. The officers of the company are unchanged. Mr. K. O. Fosse is president. The company operates a number of chipping plants supplying pulp mills of the Pacific Northwest.

Heat Balance in the Recovery Rooms of Pacific Coast Sulphate Mills

By C. P. R. CASH
Cascade Paper Co., Tacoma, Wash.

THIS paper has for its object a brief analysis of heat utilization in the recovery of waste liquors from alkali process wood pulp manufacture.

Whilst specific data are used as being representative of Pacific Coast mills, it is intended to make a generalization for plants cooking western conifers.

Conditions of course will vary in every plant according to local conditions. This paper assumes direct cooking, single stage washing, quadruple effect evaporation, smelters direct to boiler without rotary or disc evaporators. No economizers for flue gases.

Basis of calculations.

All quantities based on 2000 lbs. air dry pulp.

Density weak black liquor 1.09.

Na²O per ton pulp entering recovery system 675.

Discussion:

For every ton of pulp cooked there is produced a large quantity of spent liquor commonly called black liquor. As this has to be washed from the pulp with water it is of necessity very dilute and in good practice usually has a specific gravity of 1.09. This figure of course varies according to the method of washing. Counter-current washing, of course, gives a higher density black liquor than single stage, but the investment and labor on counter-current washing may offset the economy gained in regions where fuel is cheap.

The density of the black liquor will also be higher with indirect cooking.

Assuming the black liquor to be 1.09 specific gravity leaving the wash room we find there will be 270 cubic feet liquor per ton of pulp produced.

This quantity of liquor will contain 3000 lbs. total solids and 675 lbs. sodium salts figured as Na²O.

At the present state of the art this material has two components of value to the manufacturer, first the sodium salts, the recovery of which are essential to the economy of the process, and secondly, the fuel value of the organic matter. Doubtless in the future some process for separating the valuable organic compounds from the liquor will be developed, but so far nothing has yet been done on a large commercial scale in this line.

The calorific value of the organic matter in the black liquor is 6,500 B.t.u. per lb. or 19,500,000 B.t.u. per ton pulp. The black liquor is usually delivered to the smelter at a concentration of 50% solids, the customary practice being to evaporate to this density in a quadruple effect low pressure evaporator.

On this basis 18,000 lbs. of water is removed by multiple effect evaporation in a four effect system requiring about 5,000 lbs. of steam. This quantity of steam has to be charged against the smelter boiler output.

The concentrated liquor will contain 3,000 lbs. of water which will absorb heat from the furnace directly, reducing the heat output of the furnace by the energy required for evaporation and heating to the temperature of the stack gases. Assuming the stack gases to be 500 F., this energy will be 3,871,000 B.t.u.

Reaction energy and latent heat of fusion of soda can be taken as 880,000 B.t.u.

From the foregoing we can write the equation:

Heat output of recovery system = ((Calorific value of organic matter—heat required to evaporate and superheat water in liquor entering smelter—reaction energy and latent heat of fusion of soda) Boiler efficiency)—heat consumption in evaporators.

Taking an arbitrary figure of 60 per cent for boiler efficiency we can substitute values in the equation from the foregoing as follows:

Heat output of recovery system = ((19,500,000—3,871,000—880,000).60)—4,850,000=4,000,000 B. t. u. or 4,120 lbs. steam.

Pacific Mills Revamping

Expansion carried out by Pacific Mills, Ltd., in connection with its big plant at Ocean Falls, B. C., as part of a program that will soon be completed will represent the expenditure of close to \$500,000.

The wooden building which has housed the groundwood pulp plant ever since establishment of the mill some ten years ago has been replaced by a substantial concrete structure. The groundwood pulp building was the only remaining wooden unit at Ocean Falls, and now the entire plant is on a practically fireproof basis. Groundwood output is now rated at 200 tons daily.

Another important change has been effected with the rebuilding of one of the fourdriniers on a machine which has been concentrating on production of kraft wrapping paper. The remodeling will result in increasing capacity of the kraft plant about 10 tons daily.

Pacific Mills recently installed waxing machines for handling Kraft and sulphite papers, this development having been necessitated by the large increase in the domestic market for waxed papers. The company also has in operation two printing presses, which are being used mainly for the printing of fruit wraps. Seventy-five per cent of the Okanogan apple crop is now making use of printed wraps, and Pacific Mills are handling a large portion of the business.

New Warehouse At Millwood

A new warehouse for the Cowles Publishing Co. of Spokane, is being constructed at the plant of the Inland Empire Paper Co., Millwood, near Spokane.

The warehouse will have two stories, 60x140 feet in size. The first floor will be of a reinforced concrete construction and the second of steel frame and brick, making it fireproof.

The contract was awarded The Austin Co., engineers and builders. All materials to be used in the building will be purchased in Spokane, as far as possible.

The building is expected to be completed not later than January 1.

The Cowles Publishing Co. are publishers of the Spokesman-Review daily and Sunday papers, the twice-a-week Spokesman-Review, Washington Farmer, Oregon Farmer and Idaho Farmer.

*Presented at the pulp and paper conference held at the University of Washington, Seattle, October 26, 1928.

Training Men for the Industry

Presenting Two Papers On The Subject From Pacific Coast Mill Men*

Training Men For Pulp and Paper Mill Work

By D. B. DAVIES

Rainier Pulp & Paper Co., Shelton, Wash.

A GREAT deal of interest has been shown by young men on the Pacific Coast now connected with the pulp and paper mill work and those who would like to take it up, in the best way to proceed with their studies. This interest is shown by those attending universities as well as the mill workmen. To university students contemplating a pulp and paper career, I would suggest that if they can do so, it will be beneficial to get some actual experience in this line. This contact with the processes used in pulp and paper making would be of great value to them and give them a clear insight into the work before them. It is often difficult for young men during school years to decide what line of work to engage in, and experience would assist them in deciding whether or not to follow pulp and paper making as their life work.

The training of the rank and file paper men to better understand their work and to fit them for higher positions has received much consideration from paper manufacturers and their executives in the past few years. This is true in all the important paper mill localities in the United States and Canada. In the early stages of systematized training in Wisconsin, efforts were directed chiefly towards training foremen to fit their positions to better advantage, with the thought that these men could then train and help those in their charge to a better understanding of their work. This plan was initiated and carried on by the paper companies themselves. Later sufficient interest was shown to warrant broadening the field, and classes were organized to work during the winter months to include anyone interested.

The vocational school system of Wisconsin permitted the establishing of classes wherever there was seen to be a need, and the pulp and paper classes were therefore established under the supervision of the Vocational School Directors, with the cooperation of the industries. A very satisfactory enrollment followed, and I believe results were beneficial to employers and employees.

Another method that has been used quite extensively is the correspondence method. Many men who are desirous of improving their knowledge are able to accomplish more by quiet study at home. Courses are available where text books compiled by a joint committee of the Technical Association of the American Pulp & Paper Association and the Canadian Technical Association are used.

A pulp and paper making course is given by the extension division of the University of Wisconsin under the direction of Dr. Curran of the Forest Products Laboratory. Association text books are used in this course also.

The technical men within the industry can give valu-

(Turn to page 60)

*Presented at the pulp and paper conference held at the University of Washington, Seattle, October 26, 1928.

The Work of the Vocational Committee of TAPPI

By MYRON W. BLACK

Inland Empire Paper Co., Millwood, Wash.

I HAVE been asked to summarize the report of the vocational committee of the Technical Association of the Pulp and Paper Industry which was given at the fall meeting held at Wausau, Wisconsin, just a month ago.

In order that a summary of that report may mean anything to those of you who are not already familiar with the work of the committee it will be necessary to outline the program they have adopted and the methods they are taking to bring it to realization.

The committee was organized with the idea of bringing the colleges and the pulp and paper mills closer together. It is only within the last few years that courses in pulp and paper manufacture were instituted at the University of Maine and the New York State School of Forestry. No doubt many of the older men here can remember when a college man in a paper mill was looked at with doubt and forbearance. Times are changing. The Technical Association, when this committee was formed, considered it a wise move to try to teach those in the colleges who were considering entering our industry something of the industry before they made their final decision. In turn, the mill could learn something about the man.

In order to do this the committee thought best to divide the country into geographical districts and appointed a director for each district. Each director was to get in touch with one or more schools for his district. The schools would furnish students to the mills that were willing to give work during the summer period.

There are nine districts.

Area No.	Director	States in Area	Cooperating Schools
1	T. F. Spear	Maine	Univ. of Maine
		Massachusetts	M. I. T.
2	P. D. Bray	Vermont	Univ. of Maine
		New Hampshire	
3	C. E. Libby	New York	N.Y.S. Col. of Forestry
4		Pennsylvania	
5	J. D. Rue	North Carolina	
		South Carolina	
6	J. J. O'Connor	Ohio	Ohio State Univ.
7	B. M. Thomas	Indiana	Purdue Univ.
8	H. J. Joachim	Michigan	U. of Michigan
9	H. G. Noyes	Wisconsin	U. of Wisconsin

The director for each district was to arrange for representative men in the industry to speak to the students on the opportunities of the industry and through a representative at the school or schools to take a census of the students who would like to spend their summers in a laboring position in a mill. He should then place them to the best advantage in the mills which could give them work. At the end of the summer the student was expected to give a written report of his summer's work and the mill to give a report of the man.

There are many advantages which should come of such a system both to the mills and to the men. The paper industry is looking for good men at all times,

(Turn to page 60)

Rainier Revamps Capital Structure

Arrangements for the refinancing of the Rainier Pulp & Paper Co. have been agreed upon, subject to the approval of the stockholders, for which purpose a special meeting was held on November 12. The refinancing plans call for the redemption of the present 7 per cent bonds, 6 per cent notes and preferred stock, and an exchange of present common stock for new Class B stock.

The company, after effecting the recapitalization will have outstanding 100,000 shares of Class A common stock and 123,000 shares of Class B common stock. The Class A common stock will pay dividends of \$2 per share, and after \$2 is paid in any year on the Class B stock, will share equally with the Class B stock in any further dividend disbursements. It is expected that the Class B stock will be placed on a \$1 annual dividend basis early in 1929.

The company completed construction of a 135-ton bleached sulphite mill at Shelton, Wash., in June, 1927, and has already won a name as a producer of highest quality pulp. Operations have been under the direction of D. B. Davies, while the resident manager duties have been taken care of by L. S. Burdon. The mill has a direct tie-up with two adjacent sawmills for steam and power supply and for a portion of the wood supply.

The ownership of the company rests largely in the hands of men who are experienced and successful in the pulp and paper industry, including Isadore Zellerbach, M. R. Higgins, E. M. Mills, J. D. Zellerbach and H. L. Zellerbach, all of whom are active officers of the Crown Zellerbach Corporation, and Senator Mark E. Reed, president of the Simpson Logging Company.

Net earnings of the company for the first five months of the current fiscal year, after all charges, including depreciation and federal income taxes, after giving effect to the proposed plan of recapitalization, were at an annual rate of \$649,620.91.

Net earnings, as stated, applicable to the payment of the \$2 class A dividend, are at an annual rate equivalent to \$6.49 per share. After providing for the \$2 dividend on both class A and class B shares, the balance is at the annual rate of 91 cents per share on the two classes of stock.

Grays Harbor-Hammermill Merger Details

Details of the plan by which the Grays Harbor Pulp & Paper Co. was formed through the merger of interests of the Grays Harbor Pulp Co. and the Hammermill Paper Co., were announced late in October through the California State Corporation Department. The company was incorporated in Delaware by the Grays Harbor Pulp Co. group and headed by E. M. Mills, president, through the issuance and sale of its 25,000 shares preferred and 55,000 shares common stock merged Grays Harbor Pulp Co. and Hammermill Paper Co. interests.

Terms of the deal, as made public are:

1. Issuance of 14,250 shares preferred and 33,500 shares common stock of the new company to Grays Harbor Pulp Co. in exchange for its business and assets or to stockholders of the latter company in exchange for the outstanding stock held by them.

2. Sale of 10,750 shares preferred and 21,500 shares common stock to the Hammermill Paper Co. in units of 1 share preferred and 2 shares common at \$100.21 a share, for cash.

Details of the issuance of evidences of indebtedness of an aggregate par value of \$79,463.95 to preferred stockholders of Grays Harbor Pulp Co. in exchange for their preferred shares, were not made public.

The company began production in a new 150-ton bleached sulphite mill at Hoquiam, Wash., in September of the present year and now has under construction, adjacent to the pulp mill, a paper mill unit with a daily capacity of 50 tons of bond papers.

Gain for Crown Willamette

Consolidated report of Crown Willamette Paper Co., including wholly owned subsidiaries, but excluding Pacific Mills, Ltd., for nine months ended September 30, 1928, shows net profit of \$2,212,120 after interest, depreciation, depletion and federal taxes, equivalent after allowing for \$7 dividend requirements on 200,000 shares of first preferred stock and \$6 dividend requirements on 41,000 shares of second preferred, to 97 cents a share earned on 1,000,000 no-par shares of common stock. This compares with \$1,942,030, or 70 cents a share, on common in first nine months of 1927.

For quarter ended September 30, 1928, consolidated net profit of Crown Willamette Paper Co. and subsidiaries, excluding Pacific Mills, Ltd., was \$943,976 after above charges, equal to 53 cents a share on common comparing with \$733,342 or 32 cents a share on common in preceding quarter and \$673,703 or 26 cents a share on common in third quarter of previous year.

Pacific Mills, Ltd., for nine months ended September 30, 1928, shows net profit of \$707,655 after interest, depreciation, depletion and federal taxes, comparing with \$661,585 in first nine months of 1927.

Net profit of Pacific Mills, Ltd., for quarter ended September 30, was \$289,046 after all charges, against \$253,555 in preceding quarter and \$212,252 in third quarter of previous year.

Consolidated net profit of Crown Willamette Paper Co. for nine months ended September 30, 1928, including equity in Pacific Mills, Ltd., was \$2,690,535 after all charges, equal to \$1.46 a share on 1,000,000 no-par common shares against \$2,509,447 or \$1.27 a share in first nine months of previous year.

Crown-Zellerbach Declares Regular Dividend

At a meeting of the board of directors of the Crown Zellerbach Corporation on October 25, the regular quarterly dividend of \$1.50 per share on the convertible preferred stock was declared payable on December 1, 1928, to holders of record at the close of business on November 13, 1928. In like manner, the quarterly dividend preferred stock was declared payable on the same date, to the same record.

Fir-Tex Says Stock Half Sold

Virtually one-half the \$2,500,000 stock issue of the Fir-Tex Insulating Board Co., which proposes construction of a plant at St. Helens, Ore., has been sold, according to Tom G. Taylor, who is securing capital for the new structure. The company will utilize wood waste for the manufacture of insulating board.

The company held a directors' meeting in their Portland offices November 7. No announcement was made following the conference. A. E. Millington, president, stating that he had nothing for publication at this time.

Waldo Rosebush Returns From East

Waldo E. Rosebush, general manager of the Inland Empire Paper Co., Millwood, Washington, has recently returned from a short vacation and business trip to Appleton, Wisconsin. While at Appleton, Mr. Rosebush visited with his brother, Judson G. Rosebush, vice-president of the Nekoosa-Edwards Paper Co.

T·R·A·D·E - T·A·L·K

Devoted to the Paper Trade of the Western States

B. M. & T. Names Doran Vice President

It has just been announced by Blake, Moffitt & Towne that E. A. Doran, formerly of the Los Angeles division, has been elected vice-president, resident in San Francisco, to have full authority of the purchasing department of the corporation and over the sales departments of the San Francisco and Northern California division.



E. A. DORAN

In assuming charge of the purchasing department, Mr. Doran relieves First Vice President James W. Towne, who in the future will devote his time to general affairs of the corporation.

It is perhaps not unusual that Mr. Doran, born as he was in one of the centers of the paper industry, Holyoke, Massachusetts, found his way into that business. His entry into the business, however, was in Philadelphia, as salesman for the J. L. N. Smythe Co.

After three years in the brokerage business on his own account, Doran joined the Los Angeles staff of Blake, Moffitt & Towne. He has been with organization for over fifteen years.

His first assignment was that of salesman in the Arizona territory. When an office was opened in Phoenix, he was placed in charge—a position he held until 1921, when he was promoted to manager of the country sales and export departments. Later the management of the coarse paper department was added to his other activities.

Last year, under his immediate supervision, a new and thoroughly modern paper warehouse was erected for the Phoenix division of the company, and in assuming his new duties. Mr. Doran still retains his position in charge of this organization.

Since the announcement of his appointment, Mr. Doran has been the recipient of congratulations from his many friends in the trade, who regard him as specially well fitted for his important post in headquarters division.

Football Schedules Put Out By Denver Firm

The W. C. Nevin Candy Co., of Denver, benevolent friend of the box maker and printer, has aided the paper industry in an unusual way this fall through distributing thousands of football schedule booklets to customers. The booklets, handy little vest pocket affairs of 48 pages, contain the full schedules of all college and university teams from Coast to Coast. The scores made by these teams in 1927 are also shown in the booklet.

Pelican Employees Share Profits

Employees of the Pelican Paper Co., San Francisco, have been put on a profit-sharing basis, each receiving a share of 10 per cent of the profits in proportion to the number of years employed by the company.

Rodman C. Pell, president of the company, says that the new profit-sharing plan, coupled with the company's five-day week plan, is stimulating business considerably.

Business has grown so much, in fact, that the Pelican company recently took over the entire building which it occupies at Front and Vallejo streets, San Francisco. For some time the company has only occupied part of the building.

Mr. Pell planned to take a trip to Tahiti again this fall, but the increasing business and the expansion program made it impossible for him to go. He is going next spring for sure, however, he says.

Attridge Returns From East

R. S. Attridge, manager of the paper department of Johnson, Carvel & Murphy, Los Angeles, returned from a three weeks business trip to New York City on October 23. Mr. Attridge says that those in the paper business that he came in contact with while in the East seemed to be in a good humor, so he gained the impression that business conditions must be good there at this time. Mr. Attridge states that business has been very good of late with the paper department of Johnson, Carvel & Murphy.

C. M. Gair, secretary of the Johnson, Carvel & Murphy firm, recently spent a month in Washington, D. C., where he went to attend a convention of the Episcopal church.

Bamber Drafted For Community Chest Work

Genia Joseph Bamber of the Butler Paper Co. branch at Denver has found some additional work for himself through his widespread reputation as a good fellow. This fall, he has been drafted as colonel of the Jobbers' Division to handle contributions to the Denver Community Chest. It's a safe bet the jobbers will have to come through as never before.

Offer Direct Mail Ideas

As a move to implanting printing, layout, art and copy ideas with western printers, the Zellerbach Paper Co., San Francisco, held a display of direct mail literature in its advisory department, October 29-November 9. Circulars sent out announcing the display were titled: "A Cargo of Ideas."

Los Angeles Visitors

C. G. Sparrowe, San Francisco manager of the Butler Paper Corporation, was a recent Los Angeles visitor. He was accompanied by E. M. Herb, secretary and sales manager of the Pacific Coast Paper Mills, Bellingham. Mr. Herb is making a tour of the Pacific Coast.

To Educate On Printing Paper Uses

More extensive educational campaigns to show American business how it can profitably use increased quantities of printing and paper are planned by leading paper mills of the East, according to Rolin C. Ayres, San Francisco, advertising director of the Zellerbach Paper Co., who returned Nov. 3 from a tour of the East and Middle West.

"National publications and direct mail are to be used to tell this message," Mr. Ayres said. "The mills which have advertised in the past to create greater interest in paper and printing are planning to increase their appropriations and broaden their work."

"The mills feel that too long have business men thought of printing and paper in terms of quantity and price instead of in terms of quality. It is to overcome this situation that these appropriations are planned."

"Research is to be continued and increased to study the part printing and paper play in the nation's business to the end that the right kind of printing and the right kind of paper can be used. The mills are planning to follow up their advertising intensively, placing men in the field to see that the advertising message is effective."

The object of Mr. Ayres' visit to the East was to participate in the convention and exposition of the Direct Mail Advertising Association at Philadelphia. Mr. Ayres is a member of the board of governors and presided at the general session of the convention on October 17. Mr. Ayres said the only other Westerner he saw at the convention was J. R. Myers, Los Angeles direct mail executive.

Touchdown! Touchdown!! Touchdown!!!

"Six rahs for King Football!" says The Informant, the house organ of the Zellerbach Paper Co., in its November issue, which is dedicated to the great inter-collegiate fall sport.

The cover of The Informant shows a cardinal, white, blue and gold bleacher scene, when the ball must be on the one-yard line with the old irresistible offense meeting the well-known immovable defense.

The football number of The Informant is in keeping with the great interest being shown in the paper trade circle of San Francisco in the fortunes of the football teams of Stanford, California, St. Mary's, Santa Clara and the other colleges and universities around the Bay.

Recently, Sollie Friedenberg of the Zellerbach company was instrumental in getting up a luncheon to Bennie Lom, California's stellar halfback. The luncheon was held at the Palace Hotel, following California's 0-0 tie with Southern California and a large number of people from the Zellerbach, Crown-Willamette and Fibreboard offices attended.

Among the paper trade people present were: Harold Zellerbach, Mason Olmsted, Louis Colton, Bert Newman, J. A. Woodside, Gene Charlton, Lee Larimer, Oakley Dexter, Eddie Livengood and Ed Stalder.

Rocky Mountain Fall Business Better Than 1927

Dealers in the Denver district covering the Rocky Mountain states report 1928 fall business considerably improved over the similar period for 1927 and the entire 1928 business so far exceeding that of last year. The improvement seems to be rather general, prints and wrappers, kraft and boards as well getting in on the increase. The year-end holiday business should put the 1928 figures well over those for the preceding year.



New Home of Carpenter Paper Co., Los Angeles



The Warehouse Has Been Designed for Convenience

Carpenter Paper Has Fine New Home

The Carpenter Paper Co., Los Angeles, is nicely settled in a most attractive and efficiently equipped new home at 6500 Stanford Ave.

The building is a one-story brick structure with a handsome front and an ornamental doorway leading into the offices. The structure measures 100 by 200 feet in size. Three spacious offices take up the front part of the building, a long general office being in the center. The remaining floor space is given over to a huge warehouse, with loading doors for trucks on one side, and with doors in the rear opening on a spur track, permitting carloads of paper to be unloaded directly into the warehouse. A complete sprinkler system has been installed in the building for fire protection. Skylights furnish excellent lighting.

P. C. Holland, head of the business, is receiving many compliments from paper men on the racks or bins built in the new warehouse to store the large paper stock handled. There are 672 of these bins, and they have a capacity of nine carloads of stock. The bins insure order and cleanliness. Large quantities of paper are also stored in crates to replace the supply in the bins when this is exhausted.

Mr. Holland states that a tract of ground measuring 10,000 square feet is being held at the rear of the building to provide for an addition to the warehouse when this is needed.

Lawn and shrubs add to the beauty of the building's front approach. Thirty-foot paving has been put in on the side and rear of the building.

The Los Angeles house of the Carpenter Paper Co. in December is to become an individual unit, Mr. Holland says, and the business will be conducted on a larger scale than in the past. "A reasonable force of salesmen are to be put on to carry out our new program," he said.

Mr. Holland has been connected with the paper business for some 40 years, and for 12 years has been manager of the Carpenter business in Los Angeles. His son, Kenneth Holland, is sales manager for the business.

Patents Glassine Display Container

G. M. Blackwell of Denver was recently issued patents on a glassine display container which has already been adopted by several of the larger bakeries, groceries and confectioners. The All Good Biscuit Co. of Denver, with which Blackwell is identified, is using the containers exclusively in the selling of their cookies and cakes. The double feature of the bags permitting a full view of the produce while keeping it under most sanitary conditions has proven popular with customers and dealers alike. Piggly Wiggly stores and the Snodgrass Food Co. stores are also using the containers.

This Is a True Fish Story

J. Arthur Kelly, manager of sales for the Sierra Paper Co., Los Angeles, together with his eleven-year-old son, Tom, recently enjoyed a four-day fishing trip to the mountains above Bishop. It is not known how many fish were caught, as every time Kelly was asked how many he caught, he would change the subject almost immediately, and talk about the long icicles that the fishermen found on the bushes in the morning, and how his "Hup" ate up the mountain grades. Kelly ought to be decorated for veracity, for he is the first fisherman we have a record of, who can resist the temptation to talk with his hands when asked about the catch.

Breyman Visits Spokane

Eugene Breyman, operating manager, with headquarters in San Francisco, recently visited the Spokane division of the Zellerbach Paper Co.

He journeyed by car to Lewiston, Idaho, to visit his grandmother. He also visited his birthplace, Kindrick, Idaho, where his father, Fred Breyman, operated a bank in the early days. Mr. Breyman Sr. enjoyed the distinction of having disbursed all the money paid all the Indians at the time the United States government made the allotments to Chief Joseph and his tribe.

Mr. Breyman Sr. is now manager of the cordage department of the Zellerbach Paper Co.

Denison Looks Into Mexico

T. M. Denison, manager of the fine paper department of the Los Angeles branch of Blake, Moffitt and Towne, recently returned from a month's vacation at La Jolla. During his sojourn he gave a week-end party for the following well-known members of the paper business: George I. Tompkins, Joe Coffman, Carl Hatch, and Bert Rose. Golf was enjoyed at the La Jolla golf course, and, as usual, it is said, George Tompkins went into executive session to figure out the results of the bets, as all the players know their golf. The party also went on a sight-seeing tour into Mexico.

Back From a Tour of Eastern Mills

J. A. Brady of the sales force of Carter, Rice & Carpenter at Denver, returned late in October from a few weeks spent in visiting various Eastern mills, particularly those in Wisconsin. He attended the paper trades meeting held in Chicago in October.

"Tommy" Doane Back From South Seas

Thomas H. Doane, pioneer San Francisco paper man and formerly manager of the Pacific Coast Paper Co., has returned from his trip to the South Seas and at last reports was busily engaged in putting in a new garden in a new home he has purchased.

McMillan Looks 'Em Over

Mr. D. C. McMillan, manager of the stationery department of the Zellerbach Paper Co., San Francisco headquarters, has been making a tour of all the northern cities, in which are located their divisions.

He has been introducing new lines. We understand, from reliable sources, that he flew by airplane from Portland to Seattle, on his trip up the coast. The trip included a visit to Spokane.

Finds Good Business in New Mexico

Phil H. Knowlton, general manager of the Carter, Rice & Carpenter Paper Co., has just returned to Denver from one of his periodic trips through the New Mexico territory and reports business there in tip-top condition for this season of the year.

Dixon Company Rents New Warehouse

The Dixon Paper Co., operating in Denver and Salt Lake City, has outgrown the Denver office and found it necessary to rent additional warehouse space. A new building has been rented within easy access to the general offices on Blake Street.

Eastern Visitors View Coast

H. H. Reynolds, sales representative of the B. D. Rising Paper Co., Housatonic Falls, Mass., was a Pacific Coast visitor in October. A November visitor was Arthur V. Howland, vice-president of the Tileston-Hollingsworth Co., paper dealers of Boston, Mass.

J. W. Towne Tours East

J. W. Towne, vice-president of Blake, Moffitt & Towne, paper distributors of San Francisco, is on an eastern trip, visiting New York, Philadelphia, Boston, Chicago and other cities. He will be home before the holidays.

A New Coast Jobbing Firm

A new paper jobbing firm entered the Pacific Coast field in November when the California-Northern Paper Corp. was organized in San Francisco. It is understood that the new firm is to be affiliated with the Joseph Casse Co., San Francisco. The California-Northern Co. is representing several leading eastern mills. Headquarters are at 369 Pine St.

Joseph Casse, who has been in the importing business in San Francisco for years, is president of the California-Northern Corp. Thomas Armstrong is vice-president and Melvin Evans, secretary.

The California Northern Paper Corp. is incorporated for \$100,000. Stock is being sold on the market. It is expected an office will be opened soon in Seattle.

Corsan at Grays Harbor Mill

Thomas W. Corsan is now in the order department of the Grays Harbor Pulp & Paper Co., Hoquiam, having transferred to that mill early in October from Pacific Mills, Ltd., at Ocean Falls, B. C., where he had been for eight years, in the same department. Mr. Corsan served with the Canadian forces all through the World War and was for some time a staff officer in both France and Germany.

There is only one secret in the paper business, and that is having something left over after you subtract costs from selling price.

Portland Rumors Big Development

Rumors that a 300-ton kraft mill is to be located shortly near Portland or Vancouver, Washington, are scouted by officials of various pulp and paper companies in the vicinity of Portland. Discounting the report, the head of one company, who asked that his name be withheld, asserted that the vicinity tributary to Portland is lacking in sufficient power to operate an industry of such magnitude.

"A 300-ton kraft set-up would require 15,000 h.p. to operate," he said. "Knowing this district as I do, I question if there would be a possibility of getting enough power to run such a project more than a month at a time out of the year. Certainly not along rivers tributary to Portland. Again, a 300-ton kraft mill would utilize 600 cords of wood a day, and I know of no location where that much wood would be available without long hauls."

Finance houses, heads of power companies and equipment men generally, were inclined to scout the rumor, although one engineer stated that "there is nothing for publication yet."

Pacific Spruce Mentioned

In attempting to trace down the rumor it was learned from another engineer that his office had completed plans about three months ago for a sawmill which was to be operated in connection with a 150-ton kraft mill. The engineer stated that his office had not been commissioned, however, to draw plans for the pulp and paper mill.

"Plans for the latter were drawn by engineers of the principals," he said. "I'm sorry that I can't give you the name of the company, aside from saying that it is an Eastern concern."

Another report is current that C. D. Johnson of the Pacific Spruce Corp. of Portland plans construction of a large kraft mill in connection with his sawmill at Toledo, Ore. While it was learned that engineers had studied the possibilities of such a proposal, Mr. Johnson could not be reached for a statement.

Other rumors linked a Wisconsin pulp and paper company with pending developments in or near Portland. A New York member of the industry, who is understood to have said that his project would require 12,000 h.p., is also said to have a site under consideration near Portland. In both latter cases names were withheld from publication.

Plenty of Power

In connection with the power needed for operation of a large kraft mill, an official of a local power company made the following statement:

"There is no such thing as a power shortage in this territory. We would be glad to have customers using as much power as would be required for the operation of a 300-ton kraft mill."

Various bits of information contributing to the general rumor are so scattered that piecing together the puzzle remains difficult. From one source it was learned with fair certainty that a site definitely had been secured in Vancouver, Wash., a city which already boasts of one pulp and paper mill. One man whose name is frequently connected with the rumor has recently spent much time in the East and in the past he has been the moving figure in constructing some of the present Pacific Coast mills.

The power angle seems to be shaping itself up with the announcement that the Northwestern Electric Co. will proceed with the construction of a dam on the North Fork of the Lewis River in the general vicinity

of Vancouver, Wash. Two years ago extensive filings on land on the south side of the river were made by an agent of the Northwestern company. Recently a vast amount of acreage on the other side of the river was also acquired. The proposed dam will create a lake behind it 12 miles long, flooding the land acquired.

Another popular guess on the Portland project is that it will be a group of industries, using a large amount of power, with chemicals and paper being a part of the bigger unit.

St. Helens Bag Plant Going Up

Construction was begun last month on the 318 by 215 reinforced concrete structure to house the California Bag & Paper Co., at St. Helens, Ore., which is being built on the west side of the St. Helens Pulp & Paper Co. plant. The building, which is one-story with provisions for an additional story, will cost \$15,000.

Work on the new factory is progressing rapidly, the foundation and walls being completed early in November. It was expected that timbers would be raised about the middle of the month and that the roof would be laid by December 1. Following completion of the roof, equipment, now enroute from the former location at Emeryville, Calif., will be installed, and it is expected that production will be under way by January 1.

The plant will be under the management of Shirlaw W. McKay, manager of the bag plant at Emeryville for the past five years. The Emeryville plant is to be abandoned.

In connection with construction of the new bag factory it is interesting to note that the cement being used reached St. Helens packed in paper bags manufactured by the Jaite Bag Co., of that city. The cement shipment was the first ever to come to Oregon in paper bags, which, incidentally, proved highly practical for the use to which they were put. Of the 4,000 bags received only ten were damaged, the damage occurring while the sacks were being handled on the docks.

B. C. Government Studies Pulp Projects

Members of the provincial government, headed by Premier S. F. Tolmie, recently paid a visit of inspection to the Elk Falls site of the Canadian Crown Willamette Company's proposed power plant and paper mill near Campbell River, Vancouver Island. The government has been in office only a couple of months and it is part of its policy to study at first hand some of the larger projects involving public rights in the province. Last month they visited Prince George and discussed the big paper mill project there.

Hon. F. P. Burden, minister of lands and himself a resident of Prince George, stated that everything was ready for an early start of construction of the mill and that the newly organized Fraser Pulp & Paper Company was now in position to negotiate on a basis that would insure success. Mr. Burden, however, has refrained from giving out any details concerning the enterprise, and it is expected that the Prince George plans, like those of the Crown Willamette at Campbell River and Canadian Forest Products, Ltd., at Beaver Cove, on the Nimpkish River, are awaiting a more settled condition of the paper markets.

Exhaustive data has been prepared by provincial government officials showing that about 50,000 horsepower could be developed with the damming of Buttles Lake, while probably about half that could be produced on Campbell River without encroaching upon the Strathcona Park area.

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JOHN B. BONNELL
Recently Appointed
Secretary
Los Angeles
Paper Box Makers
Association

California Box Factories in Big Merger

The merger idea has hit the paper box industry of the San Francisco bay region and by the first of 1929 a number of the bay district paper box plants which heretofore have been independent will be operating under the name of the Consolidated Paper Box Co.

Early in November, the merger had not been completed and the entire list of companies involved, it was believed, had not been made up. At that time the companies included in the merger were:

Independent Paper Box Co., Enterprise Paper Box Co., Raisin & Zaruba, Thiebaut Brothers, York Stern Paper Box Co., Union Paper Box Factory.

In the last named company, the Union, only a one-half interest had been purchased by the Consolidated company early in November.

It was freely rumored that one or two Oakland plants were to be added to the list and possibly one or more Los Angeles plants.

The personnel of the new company is not to be announced until later in the year. It was reported, however, that one of the men being considered for the presidency of the company was Guy C. Colvin of the firm of Russell-Colvin Co., a financial house which engineered the deal.

It is possible that the completion of the merger will mark the passing of one or more faces long prominent in paper box circles in the San Francisco section. One report was that V. Zaruba of Raisin & Zaruba would retire with the deal. Mr. Zaruba is a pioneer in the industry.

Two of the San Francisco plants involved are to be closed, according to the tentative plans. They will be dismantled and the equipment sold. While no definite announcement was forthcoming, it was rumored that the consolidators were considering closing the Enterprise and Thiebaut plants.

The Russell-Colvin Co. announced that the Consolidated Paper Box Co., through the merger, would gain control of between 60 and 70 per cent of the paper box

business in Central California. All of the companies have long records of stable business and are among the outstanding firms of their kind in the state.

It was explained that practically all phases of economic benefit to be gained through mergers are represented in this consolidation. A considerable reduction of operating costs and expenses can be effected in (1) the purchase of raw materials through increased buying power; (2) elimination of expensive duplications in the form of plants, warehouses, machinery and plant taxation; (3) concentration of the division of production and sales in the San Francisco and Oakland plants; (4) economy of smaller inventory; (5) unification of handling and delivering facilities; (6) reduction of administrative compensation and economies in advertising, production, sales and general overhead costs.

Estimated earnings of the new company, after giving effect to merger economies, are given as \$151,000 annually. The new Consolidated Paper Box Co. is offering a stock issue of 37,500 shares convertible "A" and 50,000 shares of "B," priced at \$23.50 and \$18.50, respectively.

Los Angeles Converter Makes New Products

W. Brown Smith, head of the Smith Paper & Sales Co., Los Angeles, has installed a machine in his paper converting plant for the manufacture of bottle sleeves. Mr. Smith says the machine was built especially for this purpose.

While Mr. Smith is manufacturing bottle sleeves from various papers, according to the requirements and desires of his customers, he is also making a specialty of manufacturing sleeves from an embossed paper product to which he has given the name of Embostex. He also is manufacturing Embostex planting pots, small containers for transplanting young plants. Mr. Smith says these pots are most successful in holding the dirt around the roots of the plants owing to the manner by which Embostex is prepared. He also has started to manufacture shirt envelopes, used by laundries.

"I believe in patronizing the paper business on this coast," said Mr. Smith, "and endeavor to buy my materials here."

Steward Making Variety of Converted Products

The Steward Paper Products Co. now is nicely established at 637 Merrill Ave., Los Angeles, although at this writing the entire equipment of the plant has not been completed.

The Steward company was organized in the spring of the year, and the plant's equipment is new and modern in every detail.

H. B. Steward, a progressive young business man and president of the company, states that one phase of the plant's proposed activities is well launched, and that other activities, held up until specially built equipment could be installed, soon will be in operation.

At present the plant is specializing on slit and re-wound rolls, particularly rolls for mechanical machines,

such as adding machines, cash registers and ticker machines. Mr. Steward says that before starting actual production on these products, much time and money were expended in research work and experimenting in order that a perfect product might be turned out.

"We are taking extreme care and pride," said Mr. Steward, "in turning out rolls of the highest standard, and that are as perfect as those supplied by the companies making the various mechanical devices on which the rolls are used. Considerable time and expense was required to find a successful means for eliminating lint on the rolls, but this difficulty has been entirely overcome. We also made a careful study of the texture of papers, in order that we might get the best results."

Having had six years experience with the National Cash Register Co., as well as having had sales experience in selling rolls for use on machines during the time he conducted a paper business in Los Angeles for himself, Mr. Steward has been in position to acquire first hand knowledge of the product he is manufacturing.

E. J. Harwood, who several months ago was made superintendent of plant operation, has had a wide and varied experience in the paper converting industry and the general paper business. Previous to his connection with the Steward plant, Mr. Harwood was a member of the paper sales force of Johnson, Carvel & Murphy, Los Angeles. During his eastern experiences, he was with the Menasha Printing & Carton Co., and with the Tuttle Press. He also has been connected with paper converting companies on the Pacific Coast. Owing to his knowledge of the sales end of the business, he will assist in this department of the business as well as supervising plant operations.

The plant at present is turning out shelf paper, as well as rolls for machines.

Mr. Steward says he desires to work with the jobbers on the Pacific Coast in the sale of the plant's paper converting products, and expects to feature a quick service.

A three-color rotary press, specially constructed for the plant, has just been installed, and Mr. Steward says that this machine is built to handle either rolls or sheets at a very high speed and do quality work. This machine, Mr. Steward states, will enable the plant to handle the printing of soap, candy, and general food-stuff wrappers on a large scale of production. Mr. Steward also plans to manufacture gum tape.

Herb or Al to Order

"Is this your man?" asked George G. Guild, head of the Columbia Paper Box Co., Portland, as he exhibited the front of a boxboard easel on which appeared a likeness of one of the presidential candidates.

"Why, er—er—" was the confused reply of the visitor.

"Maybe you like this man better," smiled the versatile Mr. Guild, noticing that his caller seemed ill at ease. Meanwhile the boxmaker by a twist of the wrist reversed the easel. Presto—there was a picture of the other party's candidate.

Now had the visitor known which side the easel his host favored, he might have sidestepped the strained situation; however he did the best he could by giving an embarrassed laugh and falling back on more er, er's.

It was at this juncture that the host came to the rescue of his guest.

"I'll tell you about this novelty," he explained. "It's made this way so I can shift scenes quickly . . . Some-

times for policy reasons—." His voice trailed off.

"With most of the rooters on both sides wearing buttons, it is easy for the office girl to size 'em up and get their number. Next she signals me. One bell for Mr. Whoosis; two bells for Mr. Whoosit."

A two-bell signal interrupted the interview. Mr. Guild reversed the easel. As the visitor closed the door from the outside, he was still puzzling himself over the political situation.

Guild Looks for More Space

Despite the recently-completed 50 x 50 one-story addition to the Columbia Paper Box Co. plant, Portland, indications are that the "S. R. O." signs will have to be hung out shortly.

"Merging of the Columbia Tag Co., with the box factory is responsible for our crowded condition," explained George G. Guild, who heads the two companies.

"Since taking over the tag plant we have added six presses and other equipment, which naturally crowds us. Installation of the large tag machine, which prints in two colors, numbers and cuts eyelets at the rate of 220 a minute, has also made demands on space. Additional equipment to be added will further diminish our room. Virtually all space in the unit just completed is taken up with surplus stock and cutting equipment."

In an effort to provide larger quarters, the company has altered the offices and moved the sample room which has been made more complete for displaying manufactured products.

Brooks Promoted to Sales Manager

M. V. ("Dick") Brooks is no longer merely San Francisco representative of the Pacific Straw Paper & Board Co., of Longview, Wash., but is now sales manager of the company. Announcement of his promotion came late in October.

Dick's territory is the wide world. He will continue to make his headquarters in San Francisco, where he has moved to larger quarters at 55 Stevenson Street, between First and Second Streets.

Mr. Brooks recently made flying trip through the East, visiting New York and other large cities and getting back to San Francisco in two weeks.

Before coming west two years ago, Dick was manager of the St. Louis office of the La Boiteaux Co., one of the largest distributors of paper board in the world.

B. C. Egg Case Business Growing

The fast growing poultry industry of British Columbia is strengthening the market for paper boxes and fillers, according to R. E. Barker, manager of the National Paper Box Co., of Vancouver, B. C.

National Paper Box recently installed new machinery for making 6x6 spruce egg fillers and cases. Most of the output is sold to poultry associations on Vancouver Island and in the Fraser Valley.

For the first time British Columbia woods are now being used in the manufacture of excelsior fill for egg boxes, W. W. Moore having established a plant in Vancouver for producing egg case pads from Fraser Valley cottonwood.

Next to the fruit industry, which is steadily increasing its demand for fruit wraps, the egg industry promises to be one of the chief markets for the paper wrap and case trade in British Columbia. Both these

industries are now becoming highly specialized and organized and an increasing number of distributors are demanding that the product be packed in paper according to certain standards fixed by the associations.

Deline Makes Eastern Trip

Irving A. Deline, president of the Deline Manufacturing Co., of Denver, made a trip east which took him to the larger houses in Minnesota, Wisconsin and Illinois to select stock for the fancy boxes put up by his company. Deline has perfected some new styles for the coming season mostly in the round, oval and hexagon shapes. These are to be of paper and satin lined. A new novelty box for silk hose has found extreme favor with the department store trade. These boxes in the attractive Deline style appeal to the purchaser through the fact that they make an admirable decoration on the dressing table. A new St. Patrick heart shape design of candy box is being ordered extensively by confectioners.

Barker Enlarges National Box

National Paper Box Co., of Vancouver, B. C., has installed a new Miehle two-color press with automatic feed and this will be operated mainly in connection with the manufacture of two-color cartons for butter and cereal pack, according to R. E. Barker, manager.

The company has just completed construction of its new building adjacent to the main factory. The building and plant represented an outlay of approximately \$50,000, machinery alone costing about \$32,000.

Norie Has Accident

While visiting in the East recently, J. L. Norie, of the Coast Carton Co., Seattle, suffered a fall in which he was bruised. He paid little attention to the mishap until his return to Seattle late in October, when he had a physician investigate the trouble in his ankle. The result was he was ordered to the hospital for treatment of threatened infection. At last reports, he was greatly improved and able to be about.

Coast Carton Co. Running Egg Fillers

The hens of the Pacific Northwest have been contributing their share to the business of the Coast Carton Co. recently. The company has a machine running all the time on egg cases. General business is reported as quite good.

Another Use for Paper

A new use for paper and board has been found by the American Can Co., which is packing some of the cans manufactured in its San Francisco plant in large paper bags.

For years and years the American Can Co. has been sending cans to its customers in wooden slat crates. When emptied these crates have been sent back to the can factory, necessitating extra freight and handling charges on the empties.

This year the can company has been packing some of its general line cans in kraft paper bags. In some shipments, pieces of paper board have been used for the tops and bottoms of the bags and also between the layers of cans. When the cans reach the customer, the paper and board are destroyed, thus saving the freight on the container back to can plant.

Establish Waste Paper Companies

The Pacific Waste Paper Co. of Seattle has recently opened for business, with headquarters on East Marginal Way. The plant, as well as the Pacific Waste Paper Co. of Portland, is a subsidiary of the Pacific Straw Paper & Board Co., of Longview, and both are used as a collection point for waste paper. The waste is baled, and shipped in carload lots to Longview, where it forms the basic raw material for the 35 tons of chip board which the Longview plant manufactures daily.

Plans for an expansion of the Longview plant have been talked for some time, but officials of the company state that nothing definite has been decided as yet.

Port Angeles Mill To Build Wharf

Plans for construction of a wharf and warehouse at the Fibreboard Products plant in Port Angeles were announced by officials of the company early this month. A contract for the project was to be let immediately and it was hoped that the work would be completed in 90 days.

When its dock is ready for use, the Fibreboard mill will be able to handle its 12,000 tons of annual shipments on a direct basis for the first time. Under the present system, the plant is forced to carry its freight by truck more than one-half mile to a private dock or the Port of Port Angeles dock to be transferred to steamers.

A 280-foot front will be provided for vessels mooring at the new wharf. There will be 130x28 feet of open dock and the warehouse will cover a space of 28x150 feet.

Jake Steubenrauch Passes On

Jake Steubenrauch, president of the Pacific Paper & Envelope Corp., Los Angeles, passed from this life on October 6, at his home, 5739 Chesley Avenue. Mr. Steubenrauch was 72 years of age. He did not take an active part in the paper business, having retired some years ago, but acted in an advisory capacity, leaving the management of the business to his son, E. E. Steubenrauch, who is secretary and treasurer of the Pacific Paper & Envelope Corp.

McMaster Seeks To Recuperate

E. A. McMaster, general manager of the Powell River Company, Vancouver, B. C., has left for Palm Springs, Southern California, to recuperate from an illness which has kept him away from his business duties for nearly a month. This has been an extremely busy year for Mr. McMaster and he now seeks a complete rest. He expects to be in California about two months.

Seattle Box Makers Stage Banquet

Paper box makers in Seattle were looking forward this month to the annual "blowout" or banquet to be held at the New Washington Hotel on the evening of November 16. The affair serves as an annual get-together and brings into one meeting not only the box makers themselves, but the allied tradesmen and others closely associated with the industry.

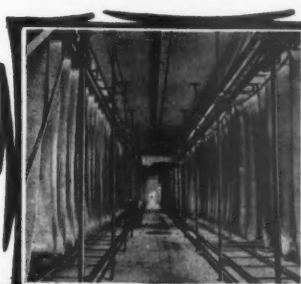
O'Donnell Takes a Little Time Off

W. J. O'Donnell, sales manager of the Fleishhacker Box Co., San Francisco, spent part of October visiting his country place at Atascadero, half way between San Francisco and Los Angeles.

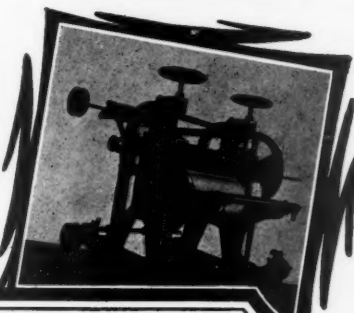
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*New Dealers
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Appointments*

Coast Will Have Largest Heavy Duck Loom

For the Pacific Coast to claim the "largest" unit of this or that is becoming a more and more frequent occurrence as the Coast grows in prominence. This time the "largest" announcement comes from the California Cotton Mills Co. The company is now constructing for its Oakland plant the largest heavy duck loom in the world. The new loom, when installed at Oakland, will be used exclusively for weaving dryer canvas.

The big loom will have a reed space of 276 inches with a cloth width capacity of 264 inches and will require 5700 square feet of floor space. And for other statistical data note this: 26,136 spools in the warp creels, 40 tons—two carloads—of yarn will be used in the warp creels at one time. The investment in this one loom will equal the investment in some entire cotton mills.

Pacific Coast Supply Announces Appointments

With the end in view of perfecting its organization better to serve the pulp and paper industry of the Pacific Coast, W. R. Weill, manager of the Pacific Coast Supply Co., announces several appointments in the company.

Management of the Portland office has been turned over to John M. Fulton, Jr. Mr. Fulton is a graduate of the University of Nevada. He was formerly connected with the sales promotion department for a large Pacific Coast paper mill.

At San Francisco E. S. Osborn has been placed in charge of the company's office. Mr. Osborn, who is a graduate of the University of California, was formerly purchasing agent for a California paper mill.

In the Seattle office Mr. Weill has appointed as assistant J. A. Nowland, Jr., recently from San Francisco. Mr. Nowland was formerly with the sales department of the Standard Oil Co.

Buffalo Forge Installs Several New Units

Breeze-Fin units have been installed by the Buffalo Forge Co. to heat the Portland plant of the Western Waxed Paper Co. where several improvements have recently been made. Buffalo Forge fans are also used for ventilation.

Another important installation made by the Buffalo Forge company consists of 12 Breeze-Fin units at the St. Helens Pulp & Paper Co., at St. Helens, Ore.

A third installation of the company's equipment recently made includes an induced draft cinder eliminator at the West Linn, Oregon, mill of the Crown Willamette Paper Co.

Dorr Company Changes L. A. Manager

A. T. Hastings, for several years manager of the Los Angeles office of the Dorr Co., sailed for Europe October 22 to join the Dorr Company Ltd., London. A. M. Kivari succeeds Mr. Hastings as manager of the Los Angeles office.

D. O. James Offers Speed Reducer Treatise

The D. O. James Mfg. Co. 1120 West Monroe Street, Chicago, have just completed and published their Speed Reducer Catalog No. 166 which describes, illustrates and lists completely every type of speed reducer made. This book should be of extreme value to all engineers interested in speed reducers, in that it is the only complete work on this subject. A copy may be obtained by writing to the D. O. James Manufacturing Company.

Cameron Winder Representative Tours Coast

Fred H. Schatten, with the Cameron Machine Co., Brooklyn, N. Y., made a tour of Pacific Coast mills from Ocean Falls, B. C., to Los Angeles in the past several weeks.

Hermann Votes the Timken Ticket

The Hermann Mfg. Co. announces that they have voted the Timken ticket and adopted an anti-friction policy in their Jordans. Which means that Timken roller bearings are standard equipment in the Hermann line.

Installing First Fuzz Collector on Coast

The Healy-Ruff Co. of St. Paul, Minn., recently made the first installation of a Broughton Fuzz Collector in a Pacific Coast paper mill. The installation is the second in the country, it is understood. The device fits any type of doctor blade and serves to remove all fuzz, dirt, and scale skinned from the dryer by the doctor blade. The device keeps the dryers cleaner and the makers claim more evenness in drying and lower operating pressure.

Object to Increased B. C. Timber Royalties

Timber holders have begun already to register their opposition to the proposed increase in royalties on British Columbia timber. Michael Manson, member of the legislature, and one of the chief timber authorities in the government party who played an important part in the Powell River Company's negotiations for Graham Island timber a year ago, is busy preparing a case to present when the legislature meets early in the spring. Mr. Manson's chief argument will be that the market for forest products has not improved as it was expected when the new schedule was adopted.

As it stands, the Royalty Act provides that on January 1, 1930, the royalty on Nos. 1 and 2 grades including spruce, fir and cedar, shall be \$1.65 a thousand instead of \$1.35, an increase of 30 cents. On grade 3, including hemlock, balsam and unclassified woods, the royalty is raised from 75 to 95 cents, an increase of 20 cents. These increases were ordered by the legislature when it overhauled the royalty legislation several years ago in the belief that the industry had prospered before it in the near future.

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SPAULDING PULP & PAPER CO.
NEWBERG, OREGON

Aberdeen Asks Water System Guarantees

The city of Aberdeen, Wash., having just about completed the construction of a \$1,600,000 industrial water plant, to bring the water to the city limits, has found a dearth of customers. The city authorized the building of the plant at an election more than a year ago, when it seemed that several pulp mills were about to construct huge plants in Grays Harbor.

The two mills particularly figured as potential customers were those to have been built by the West Lumber & Pulp Co., and of the Pacific States Pulp & Paper Co. Neither mill has materialized. Both companies signed contracts with the city for water, but, under present circumstances, neither contract has any revenue value.

When the fight to put the bond election over a year ago was at its height, fifteen proponents of the water system expressed themselves so certain that the plant would be a paying proposition that each pledged himself to pay \$1,000 a year to the system fund until such time as the system was paying \$50,000 per year.

The city council recently unanimously voted to hold to their guarantees the 15 business men who pledged this amount.

Construction Soon Complete

Councilman Floyd R. Schmitt read the contract entered into by the fifteen business men, and declared that since there were no present prospects of revenue from the system, which will be ready to deliver 80,000,000 gallons of water daily early next year, that the guarantors must be held to their pledges. The council decided to go ahead with the construction of the water system only after the same group of men had assured the body that contracts had or would be secured which would guarantee the success of the project, Schmitt said.

Other councilmen, in supporting Schmitt's motion, declared that there had been many promises of immediate construction of pulp mills here if the city went ahead with the construction of the Wynooche system, but that the pulp companies "had failed to spend a nickel in actual work," and that the water system appeared likely to become a "white elephant".

The city clerk notified the business men that they would be asked to pay the \$1,000 pledges, as the city "had to have the money," as its collection was provided for in the 1929 budget. The pledge money will be due January 1, it was said.

Action Criticized

This action of the city council brought forth considerable criticism of the council in many quarters. The Grays Harbor Realty Board criticized the council for the action, terming it unwarranted, since none of the guarantors had ever given any indication that they would not be willing to pay the pledges, and that they still have more than two months to meet the obligations.

In the meantime, the water system is nearing completion rapidly. It was far enough along on November 1 to deliver sufficient water for the operation of a pulp mill during the winter months, according to Chief Engineer A. M. Torpen.

Rumors of Grays Harbor capital, consisting largely of the group of guarantors in the water project, banding together for the purpose of constructing a pulp mill that would take at least part of the huge volume of water the plant will bring in, are afloat, but nothing definite has been accomplished yet. It has been hinted that a mill to manufacture rayon pulp may be organized.

Following the notice that the guarantors would be

held Mayor H. E. Bailey of Aberdeen issued a statement that earnings of the Wiskah system, which supplies domestic needs, will amount to more than \$98,000 this year, ample to take care of the new industrial water supply bonds until that system is a paying proposition. The earnings statement was issued "to correct misleading impressions" caused by the council's action in voting to hold the guarantors.

Two New Westminster Mills Rumored

Rumors and counter-rumors concerning a proposed pulp or paper mill at New Westminster, B. C., are still current in the Northwest and while it is known that negotiations are going forward in connection with at least two enterprises definite news of the projects is lacking.

Promoters of the proposed Poplar Island pulp and paper mill, including Senator Charles Heifner of Seattle, have been silent lately, although it was stated by one of them a couple of months ago that sufficient money had been subscribed to proceed with construction at an early date. It is understood that present market conditions are responsible for whatever delay there is in announcing a commencement of building, although other factors may also enter into the situation, including that of financing.

Another New Westminster project was linked with the names of a prominent Vancouver paper box manufacturer and a former executive of one of British Columbia's largest newsprint mills, but this appears to be still on an indefinite footing.

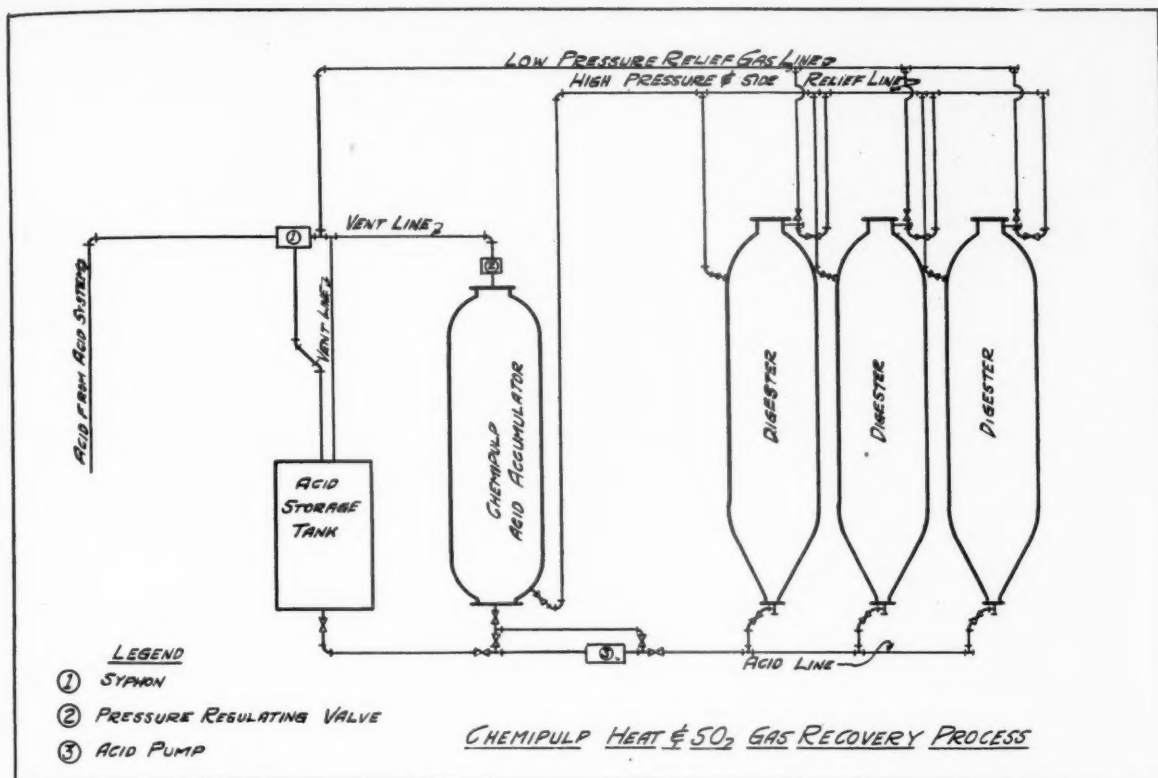
"We are not going to announce anything on this until all the details are settled and we are able to say definitely when we can start," said one of those financially interested in this latter enterprise who, however, asked that his name be withheld from publication at this time.

L. L. Leadbetter Is Dead

Louis L. Leadbetter, 52, prominent for a number of years in the pulp and paper industry of the Pacific Northwest, died in a Santa Barbara, California, hospital, October 20, following his third operation for intestinal trouble. He had been in ill health for some time.

Mr. Leadbetter was born in Brooklyn, New York, and came west about 30 years ago. His first connection with the industry was at Camas, Washington, where he was associated with his brother, F. W. Leadbetter, in the Columbia River Paper Co. In 1916 he, with another brother, Charles H. Leadbetter, and J. F. Worcester Jr., established the Astoria Pulp & Paper Mill at Astoria. This plant was destroyed by fire in 1919. Shortly thereafter Mr. Louis Leadbetter went to Los Angeles to take a position with the California-Oregon Tissue Mills. He next went to Salem to become sulphite superintendent of the Oregon Pulp & Paper Co. Recently he took over the duties of manager and vice-president of the California-Oregon Paper Co. The concern is a holding company for the Oregon Pulp & Paper Co., Salem, Ore.; Columbia River Paper Mills, Vancouver, Wash.; Vancouver Kraft Co., Ltd., Port Mellon, B. C., and the California-Oregon Paper Mills, Los Angeles.

Although Mr. Leadbetter maintained a home in Portland, he spent much of his time during the past few months at his Santa Barbara home, in which city funeral services and burial were held October 22. He is survived by his widow, three daughters, two sisters and two brothers.



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A revolutionizing process for hot SO₂ gas and liquor recovery which effects a saving of 2000 to 2500 pounds of steam for each ton of sulphite pulp produced, reduces sulphur consumption by 5% or more, absolutely eliminates monosulphite deposits and appreciably increases the yield above that obtained by the ordinary sulphite pulping process. It opens the way to the manifold advantages obtained by the rapid penetration of chips with hot acid and permits a shortening of the cooking cycle while improving the pop test and tearing quality as well as materially reducing the bleach consumption.

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AND IN CANADA

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MONTREAL, P. Q.



These logs are not floating on a hillside as they appear to be. It was just a case of the photographer leaning over too far as he snapped this view of a big boom of logs awaiting the Tacoma sawmills. In the distance is the new sulphate mill of the Union Bag & Paper Power Corp.

Union Bag Will Steam Up This Month

Everything was being whipped rapidly into shape early this month at the new 120-ton sulphate pulp mill of the Union Bag & Paper Power Corp. at Tacoma, preparatory to initial production operations which were expected to begin during the last week of November. The buildings have been completed and only some final installations and tuning up remain to be done before commercial production will begin.

Encourage Oriental Markets, Killam Urges

Need for conservation in the pulp and paper industry and for a fuller recognition of the importance of trans-Pacific markets was emphasized by Lawrence Killam, president of the B. C. Pulp & Paper Co., in addresses delivered during the month before the Board of Trade and service clubs in Vancouver, B. C.

Mr. Killam pictured the rapid growth of the pulp and paper industry in Canada and more recently throughout the Pacific Northwest. He said that the present output of Canadian newsprint mills totaled 2,500,000 tons and of this amount 1,500,000 tons was exported to the United States. Owing to the difference in climate and the nature of the timber species found in the Pacific Northwest, the conditions in the industry here were difficult to compare with those in the east, said Mr. Killam, who pointed out that mills located on tidewater on the Pacific Coast were in a position to develop the greatest potential market in the world, that of the trans-Pacific countries.

"When we are asked to legislate against the peoples of the Far East we should first consider what the possible effects of commercial retaliation may be," said Mr. Killam. "We cannot easily afford to antagonize the Far East. The trade stakes are too great to be trifled with lightly."

Would Change Australian Trade Treaty

British Columbia's sales of pulp and paper to Australia and New Zealand, now benefitted by the operations of a preferential trade agreement, may be affected materially if the whole agreement is re-opened, as intimated at Ottawa.

Representatives of the lumber industry are urging that the treaty be re-opened so that lumber could be included in the preferred list. If the treaty were opened

again Australia might insist on certain changes in the present schedule. These changes might upset the schedule now applied to newsprint and pulp. Australia is British Columbia's largest offshore market for newsprint.

McBain Surveys Interior B. C. Project

B. T. McBain, of Portland, with several of his associates, spent a few weeks in southern interior British Columbia in late September and early October, surveying the possibilities of a pulp mill for interested parties in that region. The investigation was in connection with the West Canadian Hydro-Electric Corp. Ltd., which has just about completed a power dam at Shuswap Falls. Several locations are being studied.

Proposing Straw Mill Near Spokane

An attempt is being made to interest the farmers of the wheat country in Eastern Washington and Oregon in the building of a pulp and paper mill to utilize straw. Incorporation of a company known as the Palouse Pulp & Paper Co. has been announced, with a capitalization of \$300,000. Demonstration equipment to show how the straw was converted was set up in a Palouse, Wash., store and operated by H. D. Wagon, who claims to be the inventor of process patents. A financing program is contemplated as soon as incorporation articles have been filed. A 20-ton mill was proposed, with the site to be at Palouse.

The Sacramento Pulp & Paper Co., organized about one year ago, and which proposed to build a pulp and paper mill at Sacramento, Calif., to manufacture paper from grape vine cuttings, was headed by H. D. Wagon. To date the Sacramento project has not materialized.

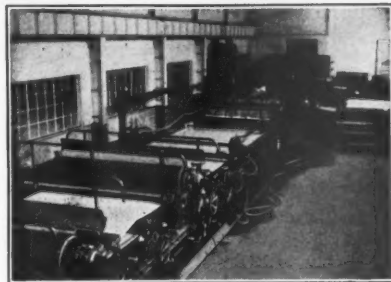
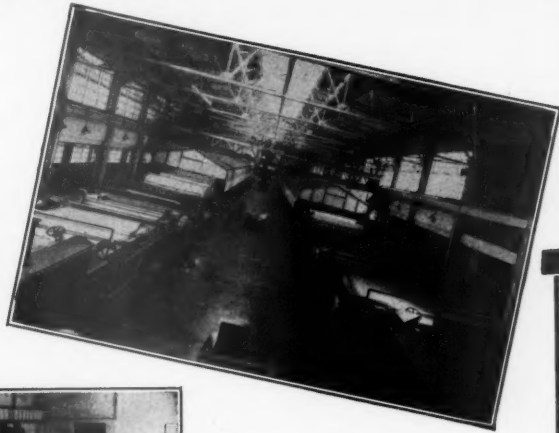
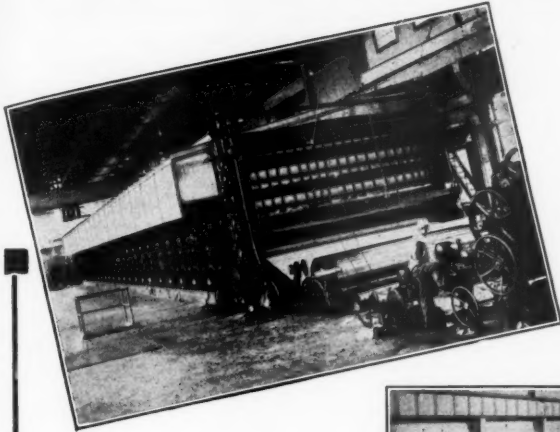
Simons Acquires C. W. P. Man

H. H. Coolidge, assistant mill manager of the Camas division of the Crown Willamette Paper Co., has joined the paper mill engineering staff of V. D. Simons of Chicago. Mr. Coolidge has been for a long time with the Crown and associate companies, spending several years at Pacific Mills, in B. C., in several positions on the engineering force, latterly acting for some time in charge of the engineering end of the big Canadian mill under the title of assistant mill manager. A few years ago he was transferred to West Linn, Oregon, as assistant manager of the mill, doing considerable research along engineering lines, and later was at the company's mill in Floriston, Calif., in a similar capacity. For two years he has acted as assistant manager at Camas, Wash. Mr. Coolidge is a graduate engineer of Yale.

Neah Bay to Get Highway

Voters of Clallam county, Washington, cast an overwhelming ballot in favor of bonds to build 10 miles of a road that will link Neah Bay with the outside world. The 10 miles will be built from the Sekiu River to the Sail River, 4 miles east of Neah Bay at the edge of the Indian reservation, in which the town is located. A federal appropriation for the 4-mile stretch is expected. A 300-cord pulpwood chipping plant is to be built soon at Neah Bay.

At the present time, Neah Bay is isolated from the outside excepting by water. Since pulpwood operations have begun, the settlement has grown to a flourishing little town, and agitation for a road has been vigorous.



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When writing CHARLES WALMSLEY & Co., please mention PACIFIC PULP & PAPER INDUSTRY.

Western Wax Making Gummed Tape

The Western Waxed Paper Co., Portland, has added a gummed products department, the new division beginning active operations October 15. The company is using a specially processed kraft supplied by various Pacific Northwest mills. Arthur B. Green, formerly of



ARTHUR B. GREEN

Middletown, Ohio, is manager.

With the exception of the air-drying system, virtually all equipment was built in Portland and in Seattle. The major unit, designed by Mr. Green, consists of a m a m o t h galvanized iron-covered chamber, 60 feet long, 22 feet high, and about 7 feet wide. The unit is built in the form of an arch, with the gumming equipment occupying space in the archway. Alongside is located the air-drying system, glue pots and a compartment for the dis-

charge of the 58-inch gummed rolls.

The roll to be gummed is first placed on a shaft adjoining two 60-inch cylinders, one above the other. Next the paper unwinds beneath the lower cylinder where the exposed paper contacts with warm liquid glue, after which the roll passes between the two cylinders which are adjustable to control the coating. The paper then passes over a smoothing bar. From here the sheet is fed into the chamber where it is subjected to a uniform temperature of 200 degrees of heat while being carried on a conveyor to the shaft where it is rewound before being discharged. Uniform heat in the glue pan beneath the lower cylinder is maintained through automatic controls. The glue container is supplied from the pots by means of pipes.

Better Packages

Next the gummed roll is conveyed to what is known as a slitting machine where it is reduced to coils of from three-fourths of one inch to five inches in width. Those greatest in demand run from one and one-half to three inches, Mr. Green explained.

"While the cost of gummed tape per yard is about the same as that of wrapping twine, less of the former is required," said Mr. Green. "Naturally, this makes it more economical. Use of gummed tape in doing up a package makes for neatness, strength and safety. Too, it affords a better advertising medium for the merchant. We plan on adding a two-color printing unit to popularize the use of our product. Later we will begin the manufacture of gummed cloth tape which is used principally to seal corrugated and boxboard containers. The cloth will be treated on the same equipment now being used for gummed paper.

"We are working out new uses for gummed tape. New uses and new users mean a growing field for the product. The East, in proportion to the population, is using more gummed paper than the West. Perhaps this is due to the fact that Western merchants haven't been educated up to the advantages of using gummed tape."

Plans for the new department have been under way for some time, Mr. Green coming west last April to

confer with officials of the Western Waxed Paper Co., regarding the location of a plant and the possibilities of using Western kraft. Following an extended survey and three months' experimentation he announced that Portland was the logical location for the factory, and that Pacific Coast kraft is fully adaptable for making a gummed product.

The plant for the new department is a one-story structure, of reinforced concrete walls, metal sash and mill type construction. A monitor type roof provides additional light and air. Contrary to what might be expected neither heat nor odor are noticeable. A corrugated asbestos wall inside the chamber prevents radiation of heat to the outside, while all odors are discharged through the vented monitor.

A new set of high, light and roomy offices have also been constructed at the plant to house the force of both gummed and waxed paper departments.

Mr. Green, who is in active charge, and who designed and superintended the construction of most of the equipment, began his career in the paper industry with the S. B. Warren Co., Cumberland Mills, Maine, where he spent eight years. Upon resigning he went to Middletown, where for four years he was in charge of the Nashua Gummed & Coated Paper Co.

Prince George Project Brightens

From sources unofficial, but of high authority, it is learned that prospects for the early construction of a huge pulp and paper mill at Prince George, in interior B. C., are unusually good. The information comes through Canadian railroad officials who are greatly interested in the project. According to latest information a 600-ton newsprint mill is to be constructed. The capital is forthcoming from English publishers who will form some arrangement to take the output directly for their own uses in England. The paper would be hauled by rail to Prince Rupert on the northern British Columbia Coast and there be loaded into English bottoms for direct delivery to England. The Fraser Pulp & Paper Co. is backing the Prince George project.

Montesano Getting Interested in Pulp

In a talk before the Active Club of Montesano, Wash., Edward Nepple told his audience that "if Montesano is ever to have a pulp or paper mill it will have to start it itself." Mr. Nepple has recently returned from a tour of the East, including several paper mill centers in Canada. He told how some Canadian cities had taken the initiative and financed a mill.

Montesano, which has quite a sawmill payroll, has been mildly interested in pulp for some time. It has even been rumored that the Schafer Bros. Timber Co., operating a mill at Montesano, were planning to go into pulp, although the Schafers have never admitted the fact. With the new mill of the Grays Harbor Pulp & Paper Co. just completed at Hoquiam, only a dozen miles away, interest is reviving in Montesano and some of the more active citizens are trying to arouse interest to encourage a pulp project in their city.

Jorgenson Returns from Japan Tour

Oscar A. Jorgenson, secretary of the B. C. Pulp & Paper Co., has returned from a two months' trip to Japan, where he made an investigation of market conditions. It is the company's policy to have a representative make a trip to the Far East once a year to keep in touch with the situation there. Japan is at present one of the company's chief export markets for pulp.



Willamette Scores Again

Shaffer Box Company Selects Willamette Digesters for their new Tacoma plant

The Shaffer plant was designed and constructed under the supervision of L. A. DeGuere, engineer for the Shaffer Company who took into consideration the long and successful experience of The Willamette Company in the manufacture and erection of digesters.

Prominent users of Willamette Digesters include:

Crown-Willamette Paper Co., West Linn, Oregon;
 Lebanon, Oregon; Camas, Wash.; Floriston, Cal.
 Columbia River Paper Mills, Vancouver, Wash.
 Powell River Co., Powell River, B. C.
 Hawley Pulp & Paper Co., Oregon City, Oregon.
 Pacific Mills, Ltd., Ocean Falls, B. C.
 British Columbia Pulp & Paper Co., Ltd., Vancouver, B. C. (Port Alice and Skancon Bay Plants)
 Oregon Pulp & Paper Co., Salem, Oregon.
 Spaulding Pulp & Paper Co., Neucherg, Oregon.
 Inland Empire Paper Co., Millwood, Wash.

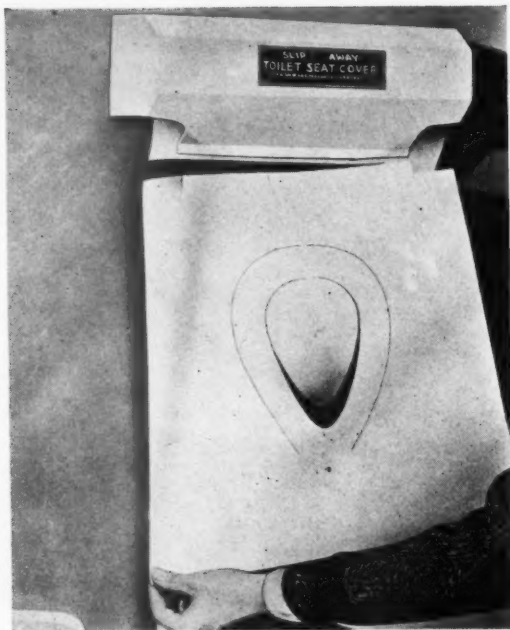
Among those features that recommend Willamette Digesters are—

- Truly cylindrical, insuring long life from linings.
- Minimum number of plates in cone and dome.
- Field erected by experts.
- Perfectly fabricated, accurately and completely shop fitted and assembled.
- Delivered on time.

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Dispensing Cabinet for Slip-Away Toilet Seat Covers

A New Sanitary Product

Self-disposing "Slip-Away Toilet Seat Covers," a new product made of tissue paper and recently invented in Portland, Oregon, is being introduced by the Sanitary Products Corp., of San Francisco.

Such public and semi-public buildings as office buildings, hotels, factories, schools, stores, halls are taking rapidly to the new product, according to L. J. Arms, manager of the western division of the Sanitary Products Corp.

In the first 90 days of sales work in three cities, Oakland, San Francisco and Portland, more than 100 installations were made. These included many large buildings. To date no sales work has been done in other Coast cities.

"Slip-Away" toilet seat covers are made of lightweight tissue manufactured by a western paper mill. The covers are sold in rolls, each containing 100 covers. These are packed 50 rolls to the carton.

In manufacturing the covers, special dies are used to cut the paper. The self-disposing feature of the cover is unique and is one of the patented features. In die cutting the covers, a flap is allowed to drop to the water, where it is soaked up and carried away by the flushing of the toilet. The manufacturers claim that this is the only practical self-disposing toilet seat cover on the market.

Special fixtures are sold or leased for the covers to dispense them one at a time. This fixture is also patented, as is the manufacturing equipment used in die cutting the paper. In addition to the covers in roll form for public buildings, the corporation will also put out an envelope containing a small number of individual covers for retail purposes, in the near future. These can be retailed for 5 cents per envelope.

The "Slip-Away" covers were conceived by Hal De Waide, a Portland inventor. The Sanitary Products Corp. has taken over the exclusive manufacture and sale of this product for the United States. It will be distributed through jobbers.

Training Men For Pulp and Paper Mill Work

(Continued from page 42)

able assistance in helping the average man in the mill to gain a more comprehensive understanding of cause and effect in the various phases of the pulp and paper processes. The success of any plan formulated depends to a great extent on a determination on the part of the student to acquire more knowledge of the work, and thus to enlarge his opportunities for advancement.

The Work of the Vocational Committee of TAPPI

(Continued from page 42)

just the same as any industry which is not stagnant and such a system gives the mills a chance to pick their men in advance.

Many college students do not realize in any measure the obstacles they will have to encounter when they attempt to make their place in the world. If it is possible for those who are not suited to the industry to be weeded out before they get supposedly permanent positions, this system will be a success if nothing else is accomplished. The large electrical companies take students from the graduating classes of the universities each year and put them through an apprenticeship course. Would it not be better for our industry to teach the coming men something of the industry and its ways before they are graduated and possibly help some boy to continue his schooling at the same time?

To return to the matter in question, this program was put into operation for the first time this summer. More than 100 college students were placed in mills and about 40 mills and colleges cooperated. At the time of the TAPPI meeting it was too early to have detailed reports of the success of the program, but the committee was quite pleased. They recommended that in the future such work should be handled from the office of the secretary, but that the regional advisors be retained.

One additional point, I do not believe it was the intention of the Vocational Committee to slight the Pacific Coast at the time the work was outlined. Nevertheless, the Pacific Coast has been more or less far removed from the center of their activities. The geographic distance is not easily surmountable for those of us who would like to take active part. If the Vocational Committee or TAPPI in general hears that the Pacific Coast wants to take more active part in the programs, even if attendance at the regular meetings is not possible, we will be given every opportunity.

EXCELLENT SAW MILL AND PULP MILL SITE FOR SALE

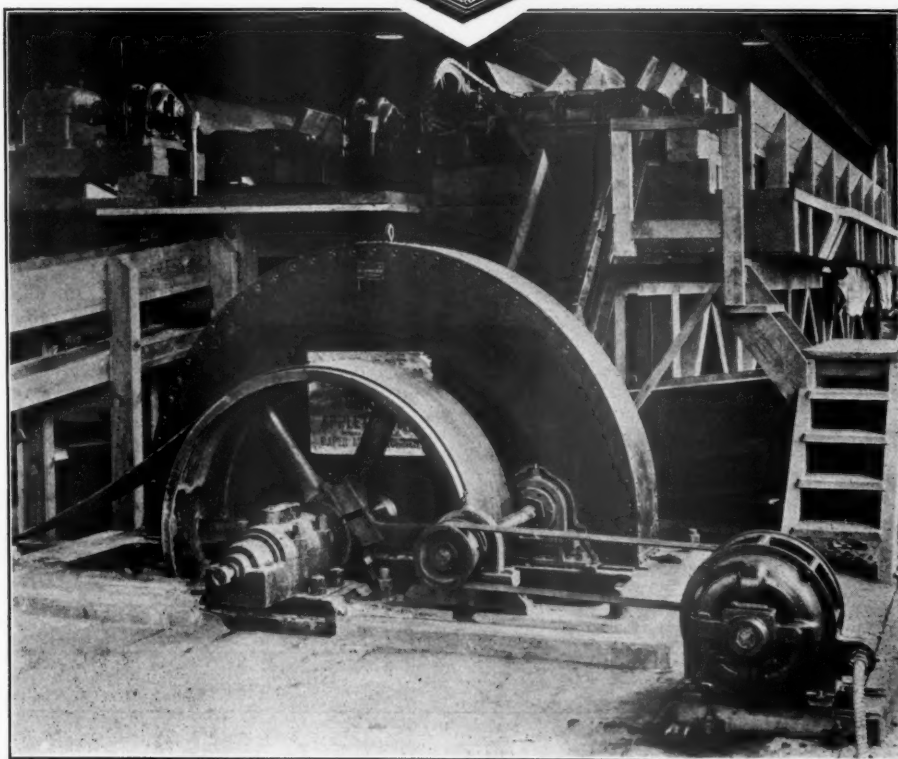
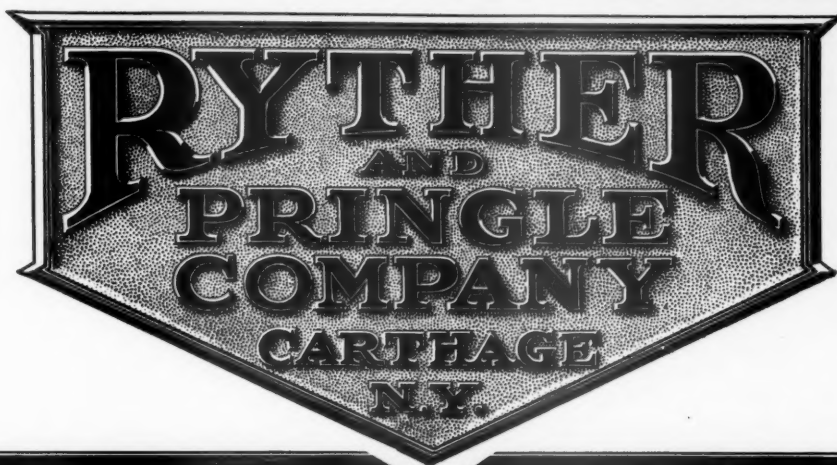
I will sell at receiver's sale to the highest bidder for cash at the front door of the court house, South Bend, Washington, on December 8, 1928, at the hour of 10 o'clock A. M., the Hanify Lumber mill site at Raymond, including excellent buildings, docks and kilns. Large site, including water front and boom. Two railroads and navigable water.

JOHN H. DRISSLER,
Receiver, South Bend, Wash.

COMPLETE LOGGING CAMP EQUIPMENT FOR SALE

I will sell at receiver's sale to the highest bidder for cash at the camp of the Owens Logging & Lumber Co., near Willapa, Washington, December 8, 1928, at 1:30 P. M., the complete logging equipment of said company consisting of 8 donkeys, lines, blocks, etc.

B. C. KREMMELE,
Receiver, South Bend, Wash.



WOOD IDEAL CHIP BREAKER

installed in a Smith & Valley chipper for the reduction of western wood. The apparatus separates the carded masses of chips and loosens the good chips from the slivers, insuring a perfect knot rejection in the chip screens. The breaker also loosens all particles of dust and dirt that have been driven into the grain of the chips and dusts the entire chipper flow.

FOR CANADA REFER

CANADIAN INGERSOLL-RAND COMPANY, LIMITED

10 PHILLIPS SQUARE, MONTREAL, P. Q.

South Bend May Buy Water System

The city of South Bend, Wash., is contemplating the purchase of the local domestic water system which is now owned by the Puget Sound Power & Light Co. The motif back of the purchase is to enlarge the system and supply the Willapa Pulp & Paper Mills which some months ago announced their intention to erect a sulphate pulp mill between South Bend and Raymond, two lumbering towns in the Willapa Harbor district of Southwest Washington. George H. Norris, consulting hydraulic engineers, has been employed by the city of South Bend to make a complete survey of the local water supply. In the meantime the South Bend press is arousing an interest in the proposition through its editorial columns.

Swafford Becomes Salesman

Harold Swafford, mill manager of the Floriston, Calif., unit of the Crown Willamette Paper Co., has transferred his energies from the operating end to the sales end of the paper game. Mr. Swafford will locate with his family in New York City in the interests of the Crown Willamette. "Hal", as he is familiarly called by his friends, is a straight Crown Willamette product, starting as a boy at Oregon City in the plant at West

Linn. Returning from France, after the war, he was promoted to be manager of the Lebanon, Ore., division and later was given complete charge of the Floriston mills.

Woodfibre's New Tunnel Assures Water Supply

British Columbia Pulp & Paper Co. will be assured of an adequate water supply this winter as a result of a tunnel which, although not yet completed, will make 53 feet of water available at all times. This will end the uncertainty which existed previously when a spell of cold weather often threatened a general tie-up following heavy snows and the freezing of Henrietta Lake, which is the chief source of water at the company's Woodfibre plant.

Discounts Pulp Possibility in B. C.

Construction of a pulp mill near Cowichan Bay in British Columbia in the event of the proposed 23-mile concrete log flume being built from Cowichan Lake to tidewater is not regarded seriously by the Cowichan Leader, a newspaper published at Duncan. The Leader, in an editorial, points to the "very great and serious expansion in pulp and paper mills throughout Canada" at the present time.

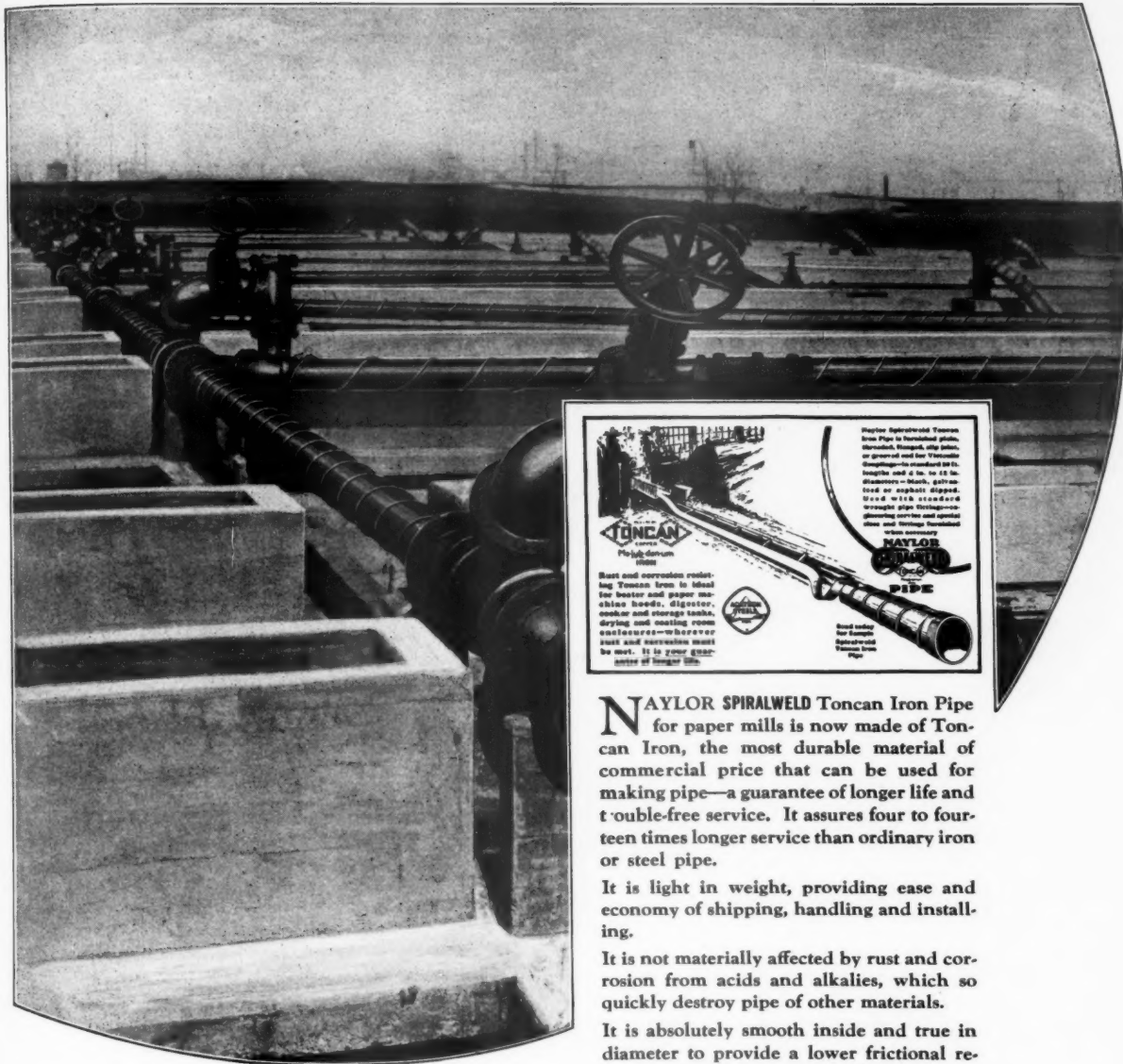
PACIFIC COAST EXPORTS—AUGUST, 1928

	News Print		Book		Writing		Greaseproof		Wrapping	
	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds
From LOS ANGELES—										
To Mexico	150	286	53	276	87	125			328	4,790
To Canada					30	100				
From SAN FRANCISCO—										
To Mexico			22	100	99	598	72	197	300	4,299
To Canada			696	4,748						
To Philippines					23	23	15	80	3,612	69,640
To Central America	1,680	56,000	302	5,741	3,331	64,952	225	1,519	673	7,242
To Australia									799	11,124
To Orient	15,473	413,010	45	226	414	2,570			9,569	221,077
From OREGON—										
To Philippines	20,675	534,588			1,852	34,722	1,473	15,970	2,850	55,142
To Australia	189	2,814	2,341	47,993	4,764	95,724				
To Orient			165	2,481	1,151	22,369				
From WASHINGTON—										
To Canada			5,821	76,798	434	5,503	328	1,945	304	7,182
To Australia			1,275	21,725						
To Philippines			11,133	195,358	281	4,108	1,080	11,962	1,025	12,393
To Orient			980	2,400						
Totals	38,167	1,006,698	22,833	357,846	12,466	230,794	3,193	31,673	19,460	392,889

PACIFIC COAST EXPORTS—AUGUST, 1928

	Tissues		Box Board		Other Paper & Strawboard		Paper Bags		Boxes & Cartons	
	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds
From LOS ANGELES—										
To Mexico	222	1,661	94	3,911			61	460		
To Australia			1,865	57,134						
To Central America	32	163					33	272	76	1,440
To South America			410	15,000						
To Orient			186	7,087						
From SAN FRANCISCO—										
To Mexico			163	3,444	43	563				
To Canada	599	1,740	283	695	56	590			273	2,661
To Philippines	1,737	14,019	1,497	7,905					2,248	43,702
To Central America	136	1,230								
To Australia	349	2,875	12,416	306,275	148	4,557			94	406
To Orient	551	375	14,255	426,357	1,016	8,456			4,320	32,971
To South America	12	75	1,030	26,714					160	1,000
To All Others			273	8,750					3	20
From OREGON—										
To Philippines			2,178	102,000						
To Orient									357	2,906
From WASHINGTON—										
To Canada	1,480	7,184	9,122	274,232	182	1,533	3	100		
To Philippines	597	8,075								
To Australia			22	500						
To Orient	44	150			77	656				
Totals	36,012	37,547	43,794	1,240,004	1,522	16,375	97	832	7,531	85,106

San Francisco shipped 50 tons (\$3895) of wood pulp to Japan.
 Washington shipped 30 tons (\$573) of wood pulp to Canada.
 Washington shipped 100 tons (\$4000) of wood pulp to Japan.
 Washington shipped 41 tons (\$1653) of wood pulp to Italy.
 Washington shipped 200 tons (\$7572) of wood pulp to Argentina.



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Canadian Exports of Pulp and Paper September, 1928

September exports of pulp and paper from Canada, according to the report issued by the Canadian Pulp and Paper Association, were valued at \$14,759,722. This was a decline of \$803,753 from the August total, values for both wood pulp and paper being lower than in the preceding month.

Wood pulp exports in September were valued at \$3,568,494 and exports of paper at \$11,191,228 as compared with \$3,618,205 and \$11,945,270 respectively in August.

As compared with September, 1927, details of the various grades of pulp and paper are as follows:

PULP—	September, 1928		September, 1927	
	Tons	Dollars	Tons	Dollars
Mechanical	15,475	403,158	28,614	874,724
Sulphite Bleached	21,865	1,652,506	18,467	1,362,914
Sulphite Unbleached	14,972	750,214	16,965	884,121
Sulphate	12,034	709,068	15,168	897,752
Screenings	2,874	53,548	2,901	54,704
	67,220	3,568,494	82,115	4,074,215
PAPER—	September, 1928		September, 1927	
	Tons	Dollars	Tons	Dollars
Newsprint	170,840	10,752,406	168,855	11,054,318
Wrapping	1,175	128,587	798	92,288
Book (cwt.)	6,918	59,796	9,382	66,708
Writing (cwt.)	2	97	597	4,917
All Other		250,342		356,219
		11,191,228		11,574,450

For the first nine months of the year, total exports of wood pulp and paper amounted to \$139,549,440 as compared with \$130,046,439 in the corresponding months of 1927, an increase for the current year of \$9,503,001.

The increase is due to larger shipments of paper which for nine months of this year were valued at \$106,126,107 as compared with \$94,715,232 in the nine months, 1927. Wood pulp exports were lower, being valued at \$33,423,333 as against \$35,331,207 in 1927.

Pulpwood exports for the nine months amounted to

1,285,127 cords valued at \$12,649,787 as compared with 1,356,164 cords at \$13,655,821 exported in the corresponding months of 1927.

September Newsprint Production

The News Print Service Bureau's Bulletin No. 129 states that production in Canada during September, 1928, amounted to 185,059 tons and shipments to 194,233 tons. Production in the United States was 102,852 tons and shipments 107,894 tons, making a total United States and Canadian news print production of 287,911 tons and shipments of 302,127 tons. During September, 18,844 tons of news print were made in Newfoundland and 1,434 tons in Mexico, so that the total North American production for the month amounted to 308,189 tons.

The Canadian mills produced 212,177 tons more in the first nine months of 1928 than in 1927, which was an increase of 14 per cent. The United States output was 88,063 tons or 8 per cent less than for the first nine months of 1927. Production in Newfoundland was 20,341 tons or 14 per cent more and in Mexico 1,407 tons more, making a total North American increase of 145,762 tons or 5 per cent over the first nine months of 1927.

During September the Canadian mills operated at 80.0 per cent of rated capacity and the United States mills at 77.2 per cent. Stocks of news print paper at Canadian mills totalled 43,800 tons at the end of September and at United States mills 35,687 tons, making a combined total of 79,487 tons, which was equivalent to 5.2 days' average production.

NORTH AMERICAN PRODUCTION

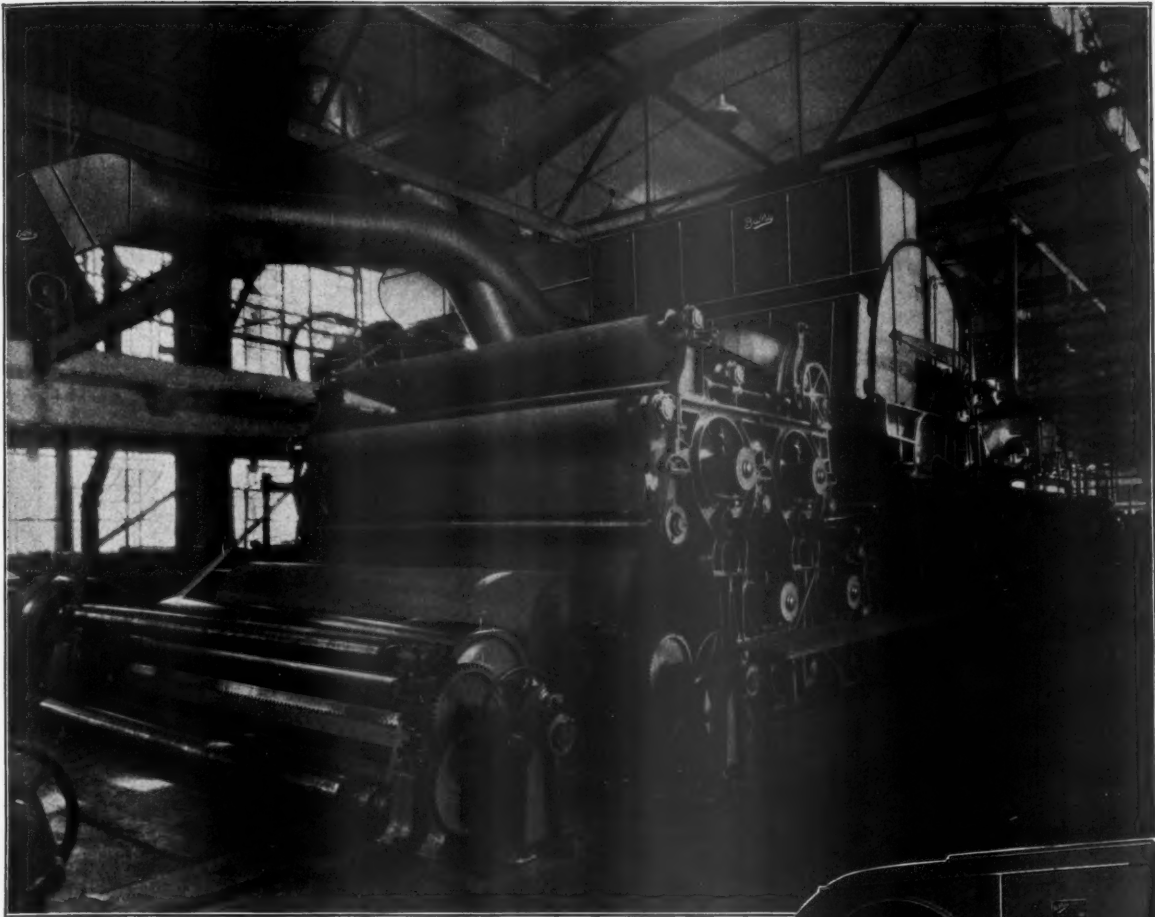
	Canada	U. S. A.	Nfld.	Mexico	Total
1928—September	185,059	102,852	18,844	1,434	308,189
1928—9 Months	1,731,226	1,047,633	170,726	12,185	2,961,770
1927—9 Months	1,519,049	1,135,696	150,385	10,778	2,815,908
1926—9 Months	1,380,722	1,239,506	133,590	9,572	2,763,390
1925—9 Months	1,113,232	1,127,436	99,381	9,502	2,311,551
1924—9 Months	1,015,793	1,109,246	48,552	8,622	2,182,213
1923—9 Months	943,692	1,126,192	47,671	9,000	2,126,555

PACIFIC COAST IMPORTS—AUGUST, 1928

	Pulpwood		Mechanically Ground Pulp		Bleached Sulphite		Unbleached Sulphite		Unbleached Sulphate	
	Dollars	Cords	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons
To SAN FRANCISCO—										
From Canada			9,983	340			5,324	189	12,854	254
From Sweden							50	1	16,795	350
To WASHINGTON—										
From Canada					8,258	101	1,446	31		
Totals			9,983	340	8,258	101	6,820	221	29,649	604

PACIFIC COAST IMPORTS—AUGUST, 1928

	Newsprint		Printing Papers		Writing		Greaseproof		Wrapping		Tissues	
	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds	Dollars	Pounds
To LOS ANGELES—												
From Canada	200,243	5,905,627										
From Sweden	31,411	1,186,141										
From France					668	1,565						
From Germany			486	796								
From Orient			750	322								
To SAN FRANCISCO—												
From Canada	249,442	2,676,222										
From Sweden	70,681	7,494,675	1,907	51,662								
From France					711	1,065						
From Germany					1,072	3,256					134	725
From Australia					502	1,830						
From Orient					379	1,373						
From Other European					909	1,867						
From All Others					2,232	6,053						
To OREGON—												
From France					4	7						
From Germany											9	130
To WASHINGTON—												
From Canada	406,291	12,084,450			11	45						
From Sweden	21,385	806,068										
From France					636	550					330	580
From Germany												
From Australia					84	370						
From All Others							1,952	116,850				
Totals	979,453	30,153,183	3,143	52,780	7,208	17,981	1,952	116,850			473	1,435



Some of the "Buffalo" equipment recently installed in the Longview Fibre Mill at Longview, Washington

Modern Methods For The Modern Mill

BETTER PAPER AT LOWER COST—that is the answer to many of the paper mill questions today.

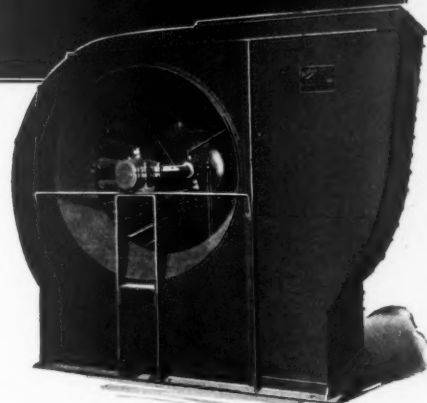
The "Buffalo" Vapor Absorption system used on the new 176-inch Beloit Yankee paper machine (one of the largest machines of its type in United States) as shown above, is new in design. It is flexible in operation and gives efficient and uniform results.

Paper mill owners throughout the country have long realized a substantial saving in using "Buffalo" equipment.

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New Company at Portland

Incorporation papers for the West Coast Paper Products Co. were filed at Salem, Oregon, last month. Arthur H. Mack, W. E. Stoppenbach and Sanderson Reed are named incorporators. The company, which is capitalized for \$25,000, "will engage in manufacturing, selling and dealing in paper cardboard, etc.," according to the filing.

Mr. Stoppenbach declined to make a public announcement regarding operations of the new concern, stating that he would have nothing to give out until the business is established. He intimated that the plant would be in operation about January 1.

The company has leased quarters at 1193-95 Union Avenue N., Portland, which is being fitted up for a factory, it was learned.

Paper Production for August

Paper production in August totaled 608,852 tons as compared with 532,624 tons in July, and 581,792 tons in June, according to reports to the American Paper and Pulp Association from members and cooperating organizations. August production was about 14 per cent above July and 4 per cent above June. The rate of production in August was 83 per cent as compared with 78 per cent in July.

The August daily average paper production was 5 per cent higher than July, and 2 per cent higher than the August, 1927, daily average. News print and felts and building papers were the only individual grades to show a decrease in daily average production as compared with July.

The total eight month's paper production to date was 4,647,805 tons as compared with 4,521,798 tons in the same period last year, an increase of about 3 per cent. Shipments for the first eight months of 1928 totaled 4,599,072 tons as compared with 4,482,532 tons during the first eight months of 1927. Stocks on hand at the end of August, 1928, totaled 290,001 tons as compared with 267,335 tons at the end of August, 1927.

Wood pulp production in August totaled 200,627

tons as compared with 186,615 tons in July and 209,797 tons in June. Production was at the rate of about 78 per cent of capacity. August was the first month to show an increase over the corresponding month in 1927 since February, 1928.

The total production for the first eight months of 1928 was 1,677,511 tons as compared with 1,708,648 tons, according to the identical mill reports to the American Paper and Pulp Association.

COMPARATIVE REPORT OF PAPER OPERATIONS BY IDENTICAL IDENTICAL MILLS FOR THE MONTH OF AUGUST, 1928

GRADE	Production Tons	Shipments Tons	Stocks on Hand Tons	End of Month— Tons
News print	115,940	114,539	40,838	
Book	96,487	98,423	56,370	
Paperboard	235,828	236,097	50,432	
Wrapping	56,980	56,746	52,937	
Bag	16,216	16,079	9,400	
Writing	31,465	31,162	42,828	
Tissue	14,783	15,190	13,397	
Hanging	5,272	5,156	4,454	
Felts and Building	10,243	10,080	2,195	
Other Grades	25,638	24,609	17,663	
Total—				
All Grades—August	608,852	608,081	290,514	
All Grades—July	532,624	539,796	290,556	
Eight Months, 1928	4,647,805	4,599,072	290,001	
Eight Months, 1927	4,521,798	4,482,532	267,335	

COMPARATIVE REPORT OF WOOD PULP OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF AUGUST, 1928

GRADE	Production Tons	Used Tons	Shipped Tons	Stocks on Hand End of Month— Tons
Ground Wood	75,842	87,375	3,467	96,214
Sulphite, News Grade	39,771	38,862	1,775	8,806
Sulphite, Bleached	25,440	22,701	2,226	3,300
Sulphite, Easy Bleaching	3,241	2,914	278	615
Sulphite, Mitscherlich	7,211	6,101	1,148	1,506
Sulphate Pulp	25,134	20,056	5,055	5,837
Soda Pulp	23,932	14,661	8,254	5,299
Pulp—Other Grades	56	—	48	123
Total—				
All Grades—August	200,627	192,670	22,251	121,700
All Grades—July	186,615	173,633	23,482	136,057
Eight Months, 1928	1,677,511	1,504,598	180,637	121,700
Eight Months, 1927	1,708,648	1,559,275	158,900	155,198

IMPORTS OF PULP WOOD AND WOOD PULP INTO THE UNITED STATES BY COUNTRIES JULY, 1928

Compiled by the U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce
(Figures Subject to Revision)

	PULP WOOD									
	Rough				Peeled					Rosced
	Spruce		Other		Spruce		Other		Spruce	
	Cords	Dollars	Cords	Dollars	Cords	Dollars	Cords	Dollars	Cords	Dollars
Canada	81,713	889,781	19,919	204,352	70,434	806,412	19,177	195,397	8,511	136,040
Newfoundland & Labrador					2,919	40,866				
Total	81,713	889,781	19,919	204,352	73,353	847,278	19,177	195,397	8,511	136,040

COUNTRIES	Mechanically Ground		Chemical Unbleached Sulphite		Chemical Bleached Sulphite		Chemical Unbleached Sulphate		Chemical Bleached Sulphate		All Other Wood Pulp	
	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars	Tons	Dollars
Austria	—	—	—	—	1,108	81,163	—	—	—	—	—	—
Czechoslovakia	—	—	133	6,930	376	30,804	—	—	—	—	—	—
Estonia	—	—	1,637	78,313	25	1,677	—	—	—	—	—	—
Finland	457	9,051	6,274	339,243	126	10,520	1,539	78,485	81	4,885	—	—
Germany	—	—	2,094	106,602	3,849	244,432	177	8,157	—	—	—	—
France	—	—	—	—	—	—	—	—	—	—	7	676
Lithuania	—	—	287	14,795	—	—	—	—	—	—	—	—
Norway	300	3,717	670	39,693	2,440	186,595	1,078	61,919	—	—	—	—
Poland and Danzig	—	—	—	—	—	—	129	5,791	—	—	—	—
Sweden	—	—	29,157	1,564,867	2,539	173,976	19,737	1,033,950	1,000	53,971	—	—
Yugoslavia and Albania	—	—	254	11,042	—	—	400	14,694	—	—	—	—
Canada	12,237	296,660	14,641	715,587	13,757	1,072,563	12,437	793,306	46	3,569	625	31,477
Total	12,994	309,428	55,147	2,877,074	24,220	1,801,730	35,497	1,996,302	1,127	62,425	632	32,153

Total Imports of All Grades of Pulp for July, 1928—129,617 tons; \$7,079,112

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Among Us Old Timers

IN a recent issue of Pacific Printer, the display line in an advertisement of Bonestell & Co., San Francisco, reads "Paper Merchants Since 1852."

"Identified with the history of San Francisco for more than seventy-five years, this house has served the needs of the printers of four generations," the advertisement continues. "In that time our state has developed from a wilderness to one of the world's garden spots."

This advertisement of Bonestell & Co. was an example of "truth in advertising" for the house has been in San Francisco since the gold rush days and always has been prominent in paper trade activities.

Founded by the late Louis H. Bonestell, who died about five years ago at the age of 92 years, the firm is now conducted by L. H. Bonestell's son, Cutler Louis Bonestell and the latter's cousin, Horatio Stebbins Bonestell.

Cutler Bonestell was asked recently what basic rule the firm had followed in obtaining its long and useful record; what did Bonestell & Co. do that the other early paper houses failed to do.

"My father," Cutler Bonestell said, "tried to practice the Golden Rule in business. He tried to treat everybody square, tried to make friends for the firm wherever he could and tried to handle all the work he could himself."

"In carrying on the business, my cousin and I are endeavoring to follow in my father's footsteps. It might be said that our firm is one of the few old-fashioned houses in the paper business today."

Mr. Bonestell was asked to explain what "old-fashioned" features were continued.

"By 'old-fashioned,'" he said, "I meant that my cousin and I still hold all the stock in the company, we both, although owners, are on the job here every day and we have never tried any great expansion to a point where the business might get beyond us."

The story of this house of service is linked closely with the romantic story of San Francisco. Louis H.



This view of San Francisco in 1851, "when the water came up to Montgomery St." tells a little story of how the Pacific Coast is growing. Clay St. is the second street over from the right and the first Bonestell establishment was at the foot of Clay, then Montgomery St. Today Clay St. extends six or eight blocks more into the San Francisco bay on "made land."

Bonestell, as a youth, came from New York, when he heard the cry of "Gold!" back in 1849. To reach California, he walked several thousand miles from Vera Cruz, on the eastern coast of Mexico, to the village of Yerba Buena, which later became San Francisco.

The senior Bonestell, like others, sought his fortune in the mines of the Mother Lode country of the Sierras, later worked as a carpenter in San Francisco and started in the paper business when he opened a store and sold newspapers, periodicals, stationery and, later, paper. At one time he camped very close to the spot where the house of Bonestell & Co., is now located at 118-124 First St.

There were several other paper merchants in San Francisco at the time Bonestell started but his house is the only survivor of that pioneer group.

Bonestell's first store was at the foot of Clay street, on the waterfront, then at Montgomery street. Those were the historic days, now always referred to as "when the water came up to Montgomery street." Today Montgomery street is eight and ten blocks from the bay.

The young city was shifting on its sandy beach and the Bonestell store was in several locations back in the

(Turn to page 70)



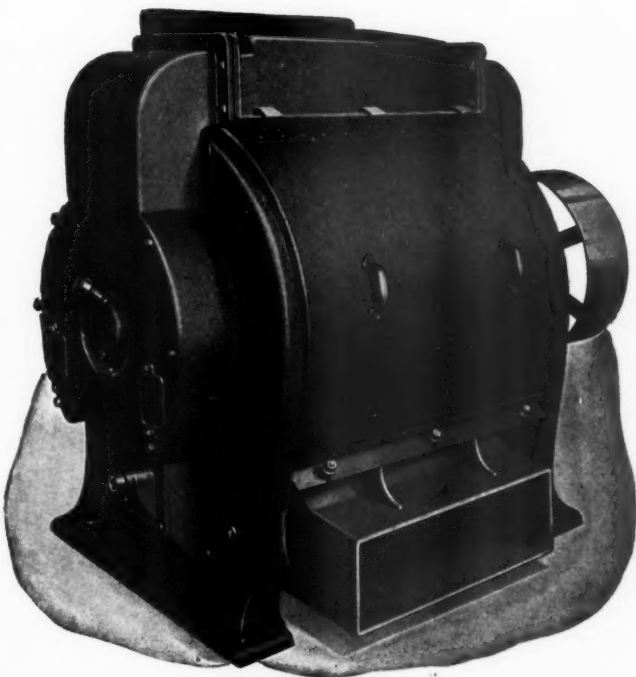
This photo was taken in Bonestell & Co.'s temporary quarters following the disastrous San Francisco fire of 1906. Behind the counter at the left is H. S. Bonestell. Seated at the center desk is Wm. Carney who has been with the Bonestell firm for 33 years. Standing beside Mr. Carney is L. H. Bonestell, pioneer founder of the house. The bareheaded man standing in the doorway at the right is W. E. Ashland, cashier

then and cashier now, 33 years with the company. The man seated at the right, reading, is Cutler Bonestell, son of the founder, who, with his cousin, H. S. Bonestell, owns the business today. Mr. Cutler Bonestell is the dean of the paper tradesmen of San Francisco and next year celebrates his fiftieth anniversary in the business. Mr. L. H. Bonestell died about five years ago at the ripe old age of 92 years.

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NASHUA, N. H., U. S. A.

SHERBROOKE MACHINERY CO., Limited
SHERBROOKE, CANADA

Among Us Old Timers

(Continued from page 68)

"fifties" and "sixties." One location they later occupied was at Washington and Sansome streets and they were, at different times, on both the southwest and the northwest corners of Sacramento and Sansome.

San Francisco was swept several times by fire in those early days. It was a city of tents and shacks and there was little to stop the wind-fanned flames. Mr. Bonestell told of once waking up from his sleep and seeing a bad fire several blocks away. So rapid was the conflagration's spread that it reached his establishment before he was fully dressed.

Came the big fire of 1906, when the city, grown to brick and stone, was laid low. The house of Bonestell was then on the northwest corner of Sacramento and Sansome, right in the path of the flames and was swept into ashes, along with hundreds of other establishments.

Like many other San Francisco houses, destroyed by the fire, Bonestell & Co. moved to Oakland, across the bay, and set up in business there. When the ashes of the ruined city cooled, the company rented land and built at the corner of Sixth and Bryant streets in San Francisco. Their stay there was not long for after one year the firm moved back to the downtown district at 118-124 First street and there it is established today.

Cutler Bonestell himself next year will celebrate his half century in the paper business, for he joined his father's enterprise in 1879—49 years ago. It is interesting to hear Cutler Bonestell talk of those early, pioneer days. Then the force consisted of himself, his father, a bookkeeper and a porter. Today the house of Bonestell employs several score men and women.

Has Watched Coast Grow

Always a student of affairs around him, Cutler Bonestell has watched the paper industry of the West Coast grow from almost nothing. And he remarks that the only radical change, except in expansion, has been the fact that in the old days the paper was made from rags while today it is made from wood fibre. The increase in size and speed of paper machines is noted, also. In the first mills a 63-inch paper machine was a big machine and production of 200 feet of paper a minute was absolutely the last word. Today some machines are 275 inches wide and run 1,000 feet or more of paper per minute.

Mr. Bonestell knew the Taylor Mill in Stockton, the first paper mill on the Pacific Coast. This mill manufactured paper from rags, which came from various sources. The Orient was a big source of supply.

Mr. Bonestell has watched the paper manufacturing industry on the Coast gradually force back eastern competition in the lower grades of paper until today the Pacific Coast, he says, not only supplies its own needs on news, wrapping and book papers but also exports considerably to countries across the Pacific. Mr. Bonestell does not think that the West will soon be a close competitor of the East on fine papers but says it will always hold its own and more so on the wrapping and printing papers.

Sandwell, of Powell River, Journeys East

P. Sandwell, resident engineer of the Powell River Co., Ltd., B. C., recently made a trip of inspection in the interests of his company over eastern Canadian mills. In mid September he was in Iroquois Falls, Ontario, and visited the great news mill of Abitibi Pulp and Paper Co. The Powell River Co. recently completed a very up-to-date hog fuel burning unit under Mr. Sandwell's direction.

Will Build Chipping Plant at Neah Bay

Pulpwood operations which have been carried on for some time near Neah Bay, located in the extreme Northwest tip of Washington, are to be supplemented with a complete chipping plant. The announcement was made late in October through the Washington Pulp & Paper Corp., at Port Angeles, the mill which has been using the Neah Bay wood supply.

Neah Bay is located in the Makah Indian reservation and wood has been cut on the Indian lands with federal sanction. The federal government has now put its stamp of approval on the installation of the chipping plant.

The Neah Bay region is extremely rainy, yet blessed with a temperate climate, and these conditions are responsible for the unusually heavy timber stands in the section, running mostly to Sitka spruce and Western hemlock. In cutting, the operators have developed a rather unusual system of reducing the trees to peeled 4-foot cordwood in the woods, using splitting guns to break down the logs, and a narrow gauge tram to bring the wood out to the dock. Pulpwood is transported to the mill on scows. Since the present practice was more or less at the mercy of the weather as far as transportation was concerned and tended to make the pulpwood operations at Neah Bay seasonal, the operators have decided upon the installation of a chipping plant to permit year-around operation.

Complete plans for the new unit have not been divulged, but officers of the company state that a chipping plant will be built capable of handling about 300 cords per day. The plant is to be Diesel-powered. A new dock will be built in a protected position. A pipe line is to be constructed also to furnish a water supply.

The new method of operation is intended to eliminate the seasonal element in preparing and shipping wood. It will also permit shipping of both cord wood and chips. The Neah Bay plant will be used as a feeder for both the Washington Pulp & Paper Corp., at Port Angeles, and the new National Paper Products Co. mill at Port Townsend, Washington.

The announcement also is interesting as indication of the trend in practice in wood supply among Pacific Coast mills. This will be the first operation where the chipping plant is brought right to the forest.

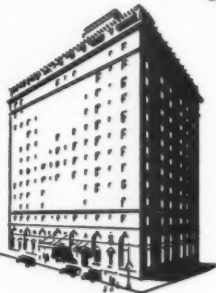
Modernizing Old Paper Machines

Unlike the automobile the paper making machine when once built seems almost to have an indefinite life. Paper manufacturers from time to time add such features as rotary screens, high slices, longer wires, removable type fourdrinier, larger rolls, winders, anti-friction drives, improved lubricating devices etc.; the width of the machine being about all that remains constant.

The September number of the "Super Calendar" the house organ of the Pusey & Jones Corp. states that the first machine built by the company in 1867 has been rebuilt and reconditioned by them four times. A roll call of old machines would probably be answered by several built before the Civil war. At least four machines now running on the Pacific Coast are 50 years old or more, and are seemingly good for many years to come.

The No. 3 machine, and the No. 8 machine at Camas, Washington mill of the Crown Willamette Paper Co. are both around 50 years old as is the No. 7 machine at West Linn, while the No. 8 machine at West Linn is much older, the dryers displaying the sign "Union Machine Company, Fitchburg, Mass. 1875".

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**NEW
WASHINGTON
SEATTLE**
Second at Stewart

Hawley Changing Sulphite System

The Hawley Pulp & Paper Co. at Oregon City, Ore., is now engaged in making several improvements in its extensive plant. This is a continuation of the five-year program, involving a total of about \$4,000,000, which was begun about two years ago and which has been carried out partly in the addition of a new 234-inch news machine and construction of an all-electric groundwood mill.

Present improvements center largely around the installation of the Dooley system in the sulphite mill. Mr. Frank Dooley of Boston, for whom the system is named, is giving personal supervision to the work at Oregon City and has been on the ground for more than a month. The claim for the system is more economical production through reduced steam costs and savings in certain raw materials.

The big new No. 4 news machine, first put into production early in the present year, after a recent temporary idleness to permit adjustments again resumed operations on October 15. The news will go to fill contracts with two Portland papers, the "Journal" and the "Oregonian".

Important improvements are also scheduled to be made on two of the veteran machines. No 2 machine will be equipped with six more dryers, making a total of 24, and the wet end will also be refitted to take a longer wire. The fourdrinier on No. 3 will also be lengthened. Both machines will be able to give speedier production after the improvements.

Other changes in the Hawley mill include a revising of the beater system to give more capacity.

Changes are also being made in the company's wood preparing plant at Milwaukie, located a few miles from the main plant. A new building 50 x 80 feet is being provided to house six new specially constructed barkers made by the Smith & Valley Iron Works of Portland.

A New Product Comes Out of Grays Harbor

The port of Grays Harbor during October saw the beginning of the business of shipping pulp get started from its own wharves. Shipments from the docks of the Grays Harbor Pulp & Paper Co. started leaving the Harbor about the middle of the month and shipments continued throughout the month.

The coastal steamer J. B. Stetson, a regular caller at the Harbor for years but usually in the lumber trade, carried 280 tons of pulp to San Francisco early in the month. About the same day a rail shipment of 500 tons of pulp left for Maine.

The foreign steamer Steel Engineer cleared on Sat-

urday, October 20, with a cargo of 750 tons of pulp for the east coast, principally Portland, Maine.

Four carloads of pulp left about October 10 via rail for Kalamazoo, Mich., for manufacture into paper.

The first foreign shipment of pulp from Grays Harbor was a 500 ton lot sent about the middle of the month to the Orient on a Japanese freighter.

Zellerbach Awarded Courtesy Medal

I. Zellerbach, San Francisco yachtsman, head of the Crown-Zellerbach Corporation and chairman of the California Fish and Game Commission, won a "Courtesy Medal" awarded by The San Francisco Examiner one day recently.

Each day The Examiner prints a story about the most courteous act reported. The story about Mr. Zellerbach follows:

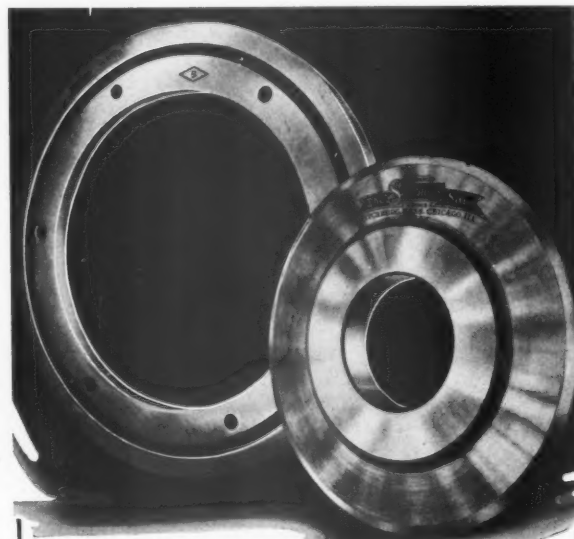
"The Examiner recommends for today's courtesy medal I. Zellerbach, well-known paper manufacturer.

"On a hot day, not long ago, while aboard his yacht with a party of friends cruising the straits between Angel Island and Belvedere, Zellerbach sighted a drifting, disabled speed boat.

"On board the latter were two boys. One, because of a broken foot in a plaster cast, was unable to swim. Zellerbach halted the cruise, according to George B. Clarkson of the State Fish and Game Commission, took the boys on his yacht and towed their boat to port."

Sperb Now At Fibreboard, Sumner

John Sperb, until recently master mechanic at the Ocean Falls, B. C., plant of Pacific Mills, Ltd., has joined the forces of Fibreboard Products, Inc., at the company's mill at Sumner, Wash.



SIMONDS Circular Paper Slitters

Edge-holding—that explains why mills in every section are turning to SIMONDS for the Circular Slitters that give them better work and more production. Simonds Slitters are true to form and perfect mechanically.

Order them from any Simonds factory or service station.

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"The Saw Makers"

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For Increased Production in Cutter Rooms Use "M & W" Cutters, Lay Boys, Backstands

BUILT TO ENDURE

It's a Moore & White Installation.....



The picture shows thirty-roll Backstand used in connection with Moore & White 130-inch Duplex Cutter and Lay Boy. Cutter equipped with seven pairs of slitters and the Lay Boy arranged to lay six piles of paper. Backstand is loaded with thirty rolls of 14-lb. fruit-wrapping paper, each roll weighing 2000 pounds. This is one of three installations . . . all in same mill. Name of mill on application.

FIRST CHOICE ALWAYS

(95% of all Paper Mills in U.S. use "M & W" Lay Boys)

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S · A · F · E · T · Y FIRST—LAST and ALWAYS

The Best Safety Device Known Is a Careful Man

Safety from the Viewpoint of Management*

The first object of management is to produce useful things at a profit. To do this successfully, the management is confronted daily with many problems; and among these are the problems of producing the best possible article at the lowest possible cost the available facilities will permit. This involves perfecting a smooth-running, well-trained organization, coupled with good operating equipment capable of operating with a minimum of delays.

On attacking these problems the management will inevitably have to consider safety. In many industries the large percentage of accidents is due to carelessness, thoughtlessness and lack of proper organization, and not to unguarded equipment. This fact has been proven repeatedly in many industries. It is fair to assume that the same men who are careless in the matter of safety to themselves and others will also be careless in other matters connected with their work.

It is evident that to attain satisfactory results in manufacturing, it is necessary to bring about safe practices throughout the organization. As a matter of good management it is necessary to design and equip machinery so that it can be operated with the minimum of hazard to the operators. When machinery is built so as to offer the greatest possible protection to the operator against accident, it can be run more efficiently than equipment that is a constant danger to the operator.

A man crossing a street intersection in heavy traffic cannot think of much else than his own safety. An operator working in dangerous surroundings is to some extent in the same position. It is then a necessary function of management to give serious thought to providing safe working conditions.

It is generally conceded that labor turnover is costly to the management. When a man is injured it is necessary to put another, less familiar with the work, in his place; thus unnecessary cost.

* Paper contributed by a Pacific Coast pulp and paper mill at a meeting of the National Safety Council, in Seattle, October 23, 1928.

Compensation is not the only cost of accidents. Quoting from a talk by E. C. Rutz, superintendent of power and maintenance, Bryant Paper Co., Kalamazoo, Michigan, "Many incidental costs develop through accidents. And, according to literature issued by the National Safety Council, one large insurance company has shown that for every dollar paid out in compensation, four dollars go for lost time, labor turnover, wasted time, etc."

It is desirable from the viewpoint of management to enjoy a favorable attitude of the public. Unnecessary accidents in an industrial plant may bring about a feeling of antagonism on the part of the employees and the public. The public, as reflected through legislative acts, is inclined to hold industrial management responsible for accidents causing time loss to employees, and it becomes the duty of management to reduce accidents to a minimum.

If we look over the list of the companies taking part in safety activities, it will be seen that the list contains many of the most successful industrial organizations in the United States; evidence that the management of these concerns have given safety serious consideration.

An earnest endeavor on the part of management to prevent injury to employees will make a favorable impression, and will help to bring about a better understanding between employer and employee.

C-W Plans School Safety Contests

The Crown Willamette Paper Co. has announced an essay and poster contest on accident prevention to be open to high school students in the vicinity of their mills at Camas, Wash., West Linn and Lebanon, Ore. The students will be asked to contribute articles on "Accident Prevention in My Community". Poster designs suitable for placing on bulletin boards in the different paper mills or store windows are also to be submitted. The contest will close December 15. The company is offering cash prizes.

STATEMENT OF ACCIDENT EXPERIENCE—MONTH OF SEPTEMBER, 1928.

Rank	Company—	1928 Standing Jan. 1 to Date	Number Employees	Man Days Worked	Number Lost Days Accidents	Total Days Lost	Lost Days Per 1000 Man Days
1	Fidalgo Pulp Mfg. Co.	(12)	84	2,328	0	0	0
2	Pacific Coast Paper Mills	(2)	61	1,170	0	0	0
3	Tumwater Paper Mills	(10)	40	304	0	0	0
4	Inland Empire Paper Co.	(4)	262	7,336	0	20	2.73
5	Washington Pulp & Paper Co.	(6)	377	10,191	4	30	2.94
6	Crown Willamette Paper Co.	(1)	1,106	28,929	4	98	3.39
7	Everett Pulp & Paper Co.	(3)	375	9,477	1	39	4.12
8	Pacific Straw Paper & Board Co.	(*)	78	1,832	1	8	4.37
9	Longview Fibre Co.	(8)	313	8,505	4	39	4.59
10	Cascade Paper Co.	(5)	220	6,011	2	31	5.16
11	San Juan Pulp Mfg. Co.	(13)	125	3,683	2	21	5.70
12	Fibreboard Products Inc., Port Angeles	(9)	221	4,722	4	41	8.68
13	Fibreboard Products Inc., Sumner	(7)	126	3,164	2	33	10.43
14	Columbia River Paper Mills	(11)	253	6,878	3	99	14.39
15	Rainier Pulp & Paper Co.	(*)	225	5,567	4	81	14.55
			3,868	100,097	31	540	5.39

Figures set in black face type represent standings below the average of the month.

*Reports incomplete for year.

Volume
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